

A practical treatise on the morbid sensibility of the eye, commonly called weakness of sight / [John Stevenson].

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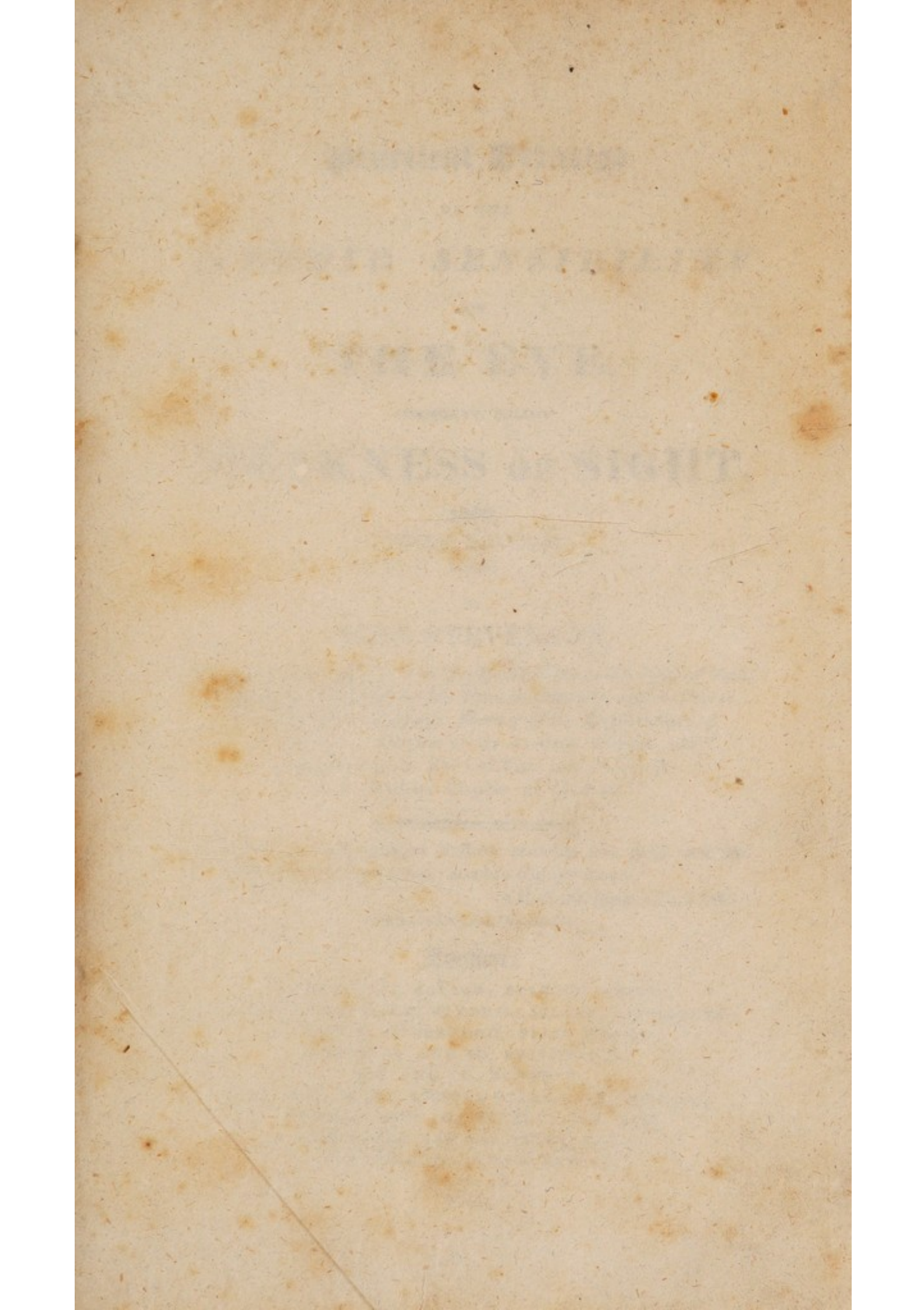
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A
Practical Treatise
ON THE
MORBID SENSIBILITY
OF
THE EYE,
COMMONLY CALLED
WEAKNESS OF SIGHT.

THIRD EDITION.

BY
JOHN STEVENSON,

*Surgeon-Oculist and Aurist to His Royal Highness the Duke of York,
their Royal Highnesses the late Princess Charlotte, and the Prince
Leopold of Saxe Cobourg; Member of the Royal College of
Surgeons, &c.; Lecturer on the Anatomy, Diseases, and
Operations of the Eye and Ear; and Author of
"A Practical Treatise on Cataract."*

La partie de l'œil, quoique bornée, presente une riche moisson,
pour occuper, long-temps, nombre d'observateurs.

Cel. Janin Memoir. sur l'Œil.

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1819.



306606

To His Royal Highness

The DUKE of YORK and ALBANY,

&c. &c. &c.

SIR,

The gracious permission to prefix the name of your Royal Highness to the THIRD EDITION of the following pages, is not less flattering to my ambition, than gratifying to my feelings.

I gladly avail myself of the opportunity which the present occasion affords me, of offering my most humble and grateful acknowledgments for the high and distinguished honor of having confided to me, on the very obliging recommendation of your Royal Highness's Medical Attendants, the entire management of your Royal Highness's case; and for

the very condescending manner in which your Royal Highness was graciously pleased to appreciate and reward my professional exertions, by conferring upon me those appointments which it will ever be the pride and study of my life to endeavour to deserve.

I have the honor to subscribe myself, with the highest sense of duty and respect,

SIR,

*Your Royal Highness's most obliged,
faithful, and humble Servant,*

JOHN STEVENSON.

*Great Russell Street,
April 6, 1819.*

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INTRODUCTION.

THE Organ of Vision is the most valuable, the most necessary, as well as the most ornamental of our Senses; its loss or imperfection is therefore justly dreaded or deplored as a most grievous misfortune. But the Eye, from its peculiar economy, complicated structure, and exposed situation in the human body, is liable to a derangement of its functions, by many external, as well as internal causes.

Of late years, a dreadful ophthalmia has been introduced into this country from Egypt, which has added to the frequency

and malignancy of the diseases of the eye. From which circumstance, this highly interesting class of disorders, heretofore too much disregarded by regular practitioners, has engaged the serious attention of surgeons, equally eminent for their skill and professional attainments. And, if we duly contemplate the great number, the variety, and the exquisitely painful nature of many of the ailments incident to that very delicate organ, the quickness with which, when neglected or injudiciously treated, they prove permanently detrimental, or wholly destructive to the faculty of vision ; and also the nicety required in their treatment, and operations, must we not agree with St. Ives,* that “ the most indefatigable and intire appli-

* See his “ Treatise on the Diseases of the Eyes,” translated by Dr. Stockton in 1774, Preface, p. 8.

cation is hardly adequate to the difficulties of this science?"

When we consider also the rapidity of some diseases in parts so complicated, we must admit the great importance of diffusing, as generally as possible, a knowledge of whatever relates to any imperfection in one of the principal sources of our most refined pleasures, and intellectual improvements.

Since I have relinquished general practice, and devoted my attention exclusively to diseases of the *Eye*, and *Ear*, I have been frequently consulted by persons afflicted with a Morbid Sensibility of the Eye, usually called *Weakness of Sight*; a complaint which has not, as far as my knowledge of the subject extends, been

described with sufficient discrimination, nor has its cure been established upon a rational pathology.

Some of the cases alluded to in this work had been of long standing, and had obstinately resisted the successive efforts of different eminent practitioners. In almost every instance I was informed, that tonics in one shape or other, and in various combinations, constituted the prevailing plan of treatment, which had probably been adopted on the supposition, that *the disease*, as its *name* implies, is the *effect* of *debility*. The constitutional relaxation of the persons more especially subject to its attacks, added to the exciting causes, and the attendant symptoms, certainly seemed to justify such an hypothesis. For some time I entertained the

same opinion, and I am ready to acknowledge, that I was repeatedly disappointed in my attempts to relieve it, till a different view of the proximate cause, and a different mode of cure suggested themselves. The result of that practice, founded upon a novel, but it may be presumed, from my having since very successfully adopted it, a correct view of the nature of this disease,—induces me to submit the particulars to the public.

Great Russell Street,

1810.

PREFACE

TO THE

SECOND EDITION.

As a large impression of this work has been sold, and a **SECOND EDITION** is called for, I beg leave to observe, that a little alteration has been made in its **FORM** and **ARRANGEMENT**. On re-considering the subject attentively, it occurred to me, that if the Treatise were divided into more chapters, and a principal part of the notes embodied in the text, such division and transposition would render the publication more perspicuous and intelligible to the Reader. Accordingly,

this plan has been adopted.—With respect to the MATTER, little or nothing new has been introduced; subsequent experience having confirmed the view I took, and the opinions which I entertained, when I first published this Treatise. Nor was it deemed necessary to augment the size and price of the present edition, by inserting any additional Cases of Weakness of Sight; those already detailed appearing, in my judgment, abundantly sufficient to illustrate and establish the principles and treatment which I have pointed out and enforced in the following pages.

Great Russell Street,

1813.

PREFACE

TO THE

THIRD EDITION.

THE approbation of professional men, and the public, has been decidedly proved by the sale of a *second large impression* of this Treatise, and the communications of several distinguished medical friends concur with my own more recent experience, fully to confirm the reasonableness at least of the principles advanced, and the efficacy of the mode of treatment recommended, in the following pages. I do not therefore feel warranted in making any material alteration either in the matter, or in the arrangement of the present work. I content myself with simply

remarking, as an exception to a general rule, that more extended opportunities of observation have convinced me of the necessity of sometimes deviating partially from the directions inserted in Chap.V. relative to the limited use of bleeding.

At the time that statement was written, I had reason to believe that the topical abstraction of blood, by means of leeches or cupping, aided by the other auxiliary measures there pointed out, would be found adequate to the cure of every degree and modification of weakness of sight. But since that period, a few cases of a very unyielding character have fallen under my notice, in which it became expedient to abstract a much larger quantity of blood than I had previously imagined would, in any instance, be required. I am inclined however to suspect, that the cases alluded to ought not, in strict propriety, to be

esteemed instances of the idiopathic disease. It is more probable that the morbid sensibility of the Eye constituted only one link in the chain of morbid affections, the brain itself participating in the more or less congestive, or perhaps inflammatory state of the retina. I am led to adopt this opinion, partly on account of the very disproportionably *large* evacuations of blood which were found indispensable to subdue the exquisite susceptibility of the Eyes to light in those instances, as compared with the *small* quantity usually required to be withdrawn in *common* cases of weakness of sight; and in part, from the symptoms associated with this more violent form of disease giving way at the same time, and under the same treatment which proved effectual in curing the morbid sensibility of the organ of vision.

In further illustration of this position I may add, that many instances have

occurred, and numerous examples of the same fact are recorded in the writings of the most respectable pathologists, which bear the most decisive evidence of preceding inflammation, and in some instances even of abscess in the parenchymatous substance of the cerebrum of patients, whose symptoms, during life, did not lead to the suspicion of any morbid condition of that organ, and in whom the malady that proved fatal had been referred to a part which, on examination after death, exhibited not the slightest trace of deranged action. Without however contending for the accuracy of the opinion which I have ventured to suggest, I shall proceed to remark, that two of the cases alluded to were females, whose appearance and constitutional susceptibility to external impressions indicated what is called the *nervous* temperament. In accordance with this view they both had been, for a great length of time, (the Countess of

R——, with more or less severity, for the tedious period of nearly twelve years*) subjected by the direction of different medical practitioners to such cordial and tonic remedies as were deemed most appropriate to subdue nervous sensibility, the presumed cause of their distressing local and constitutional ailments.

Influenced by the belief that topical congestion, or actual inflammatory action, affecting the brain itself, and extending, either by continuous, or by remote sym-

* For an explanation of the probable cause of the long existence of cases of this description, without materially injuring the organization of the affected part, the reader is referred to the suggestions in Chap. V. of this Treatise. An habitually turgid condition of the blood vessels of the brain greatly disposes not only to the occurrence, but also to the frequent repetition of attacks of inflammation, in the form of ophthalmia or otitis, accordingly as the organ of sight, or that of hearing, may be prone, or exposed, to the various exciting causes of inflammatory action, and which can be cured only by copious depletion.

pathy, to the immediate organ of vision, constituted the true character of their disease, I did not hesitate to propose for adoption the depleting plan of treatment, with as much vigor as their strength, and the circumstances of their cases would admit. I had the gratification speedily to witness a manifest improvement in their health, and by a careful perseverance in the same mode of treatment, they soon became capable of bearing moderate degrees of light, and of reading and writing with scarcely any pain or inconvenience ; their spirits rising in proportion to the gradual disappearance of their nervous symptoms. It may be right to add, that the successful termination of their respective cases, was not accomplished until blood had been taken away in divided portions, and at different periods, to the amount of more than two hundred ounces, assisted by the constant exhibition of purgatives, together with the alternate application of blis-

ters, cooling lotions, and ice to the head and neck; and the observance at the same time of a rigid antiphlogistic diet, a temporary seclusion from strong light, and restriction from reading, and other exertions of the eyes. The younger practitioner should be aware, that in cases marked by great determination to the brain, and especially those in which the capillary vessels of the medullary portion of that viscus are inflamed, such copious discharges of blood are in general required, as would scarcely be ventured on by the inexperienced, in order to bring that condition of parts under the influence of curative means.

In connexion with this subject, I cannot forbear from observing, (as was more fully explained and illustrated in the anniversary oration I had the honor to deliver before the Medical Society of London two years since, and from which copious extracts were published in the Medical and Physical Journal)

that some of those complaints, in common language denominated nervous, and which are characterized principally by a great susceptibility to external impressions, occasional headache, the source of which is usually referred to the stomach, with other symptoms of dyspepsia, extreme lowness of spirits, restlessness, and anxiety, derive their origin from an inflammatory, or at least a congestive state of the vessels of the cerebral mass, and that the most effectual mode of relief consists in topical bleeding, gentle purgatives, and other means of counter irritation. The prevailing doctrine of late, which attributes almost every ailment incident to the human frame, to a functional defect in the action of the liver, has served to divert our attention too much from the brain as the primary seat of disease; and that assemblage of symptoms which has been in general and too exclusively imputed to a morbid affection of the secretory hepa-

tic apparatus, is, I am convinced, not unfrequently the result of a sympathy of the biliary and gastric organs with the excited state of the sensorium.

With regard to the mode in which blood can be abstracted with the greatest success, it may be useful to offer a few remarks applicable to those more violent and complicated cases of weakness of sight, to which I have already adverted. Without meaning to undervalue the utility of different forms of bleeding, I would suggest, that in the instances alluded to, and indeed in all cases of acute ophthalmia, blood drawn from the external jugular vein is far more decisive in its effects, than any other mode of venesection. What led me to this practice in the first instance was the case of a child who was brought for my assistance some years since, labouring under that most formidable acute inflammation of the conjunctiva, commonly called

purulent ophthalmia. The vessels of the palpebraic conjunctiva were so much enlarged as to occasion a complete eversion of the thickened eye-lids, and the disease was altogether so violent as to threaten very speedy destruction to the organ of vision. The jugular vein was immediately opened, and the blood being allowed to flow in a full stream *ad deliquium*, the eye-lids spontaneously returned to their natural situation, and the chemosis at the same time so completely subsided, that the vessels of the conjunctiva became scarcely visible. In short, this single bleeding might be said to have effected a perfect cure, for nothing more was done except giving a couple of doses of purging powders, and applying an astringent lotion to the eyes.

Encouraged by the salutary result of this method of abstracting blood, I have since that period been in the constant habit of having recourse to it when practicable ; and

I can now, from very ample experience, confidently recommend it as the most efficacious mode of relieving every species of *external* ophthalmia. Iritis, and acute inflammation of the choroid, seem to me to be much more under the influence of bleeding from the temporal artery, the main trunk of which should be selected for the purpose, and care taken completely to divide it, after the necessary quantity of blood has been suffered to escape. When the duration and violence of the disease justify the anticipation that we shall have occasion to resort several times to the lancet, it will be better to take away moderate quantities of blood at different times, rather than attempt the cure by a copious evacuation at a single operation. The absolute amount, and the number of repetitions, must be regulated by the nature of the case, the urgency of symptoms, and the strength and constitution of the patient.

The practitioner should however be aware, that in those instances which may require several bleedings, it very commonly happens that *little or no apparent* benefit is derived till after a certain though indeterminate quantity of blood has been abstracted, which can be ascertained only by carefully watching the effect of each evacuation, until an impression be made on the disease. Supposing nothing arise in the course of our proceedings to forbid their continuance, we must persist cautiously, but unhesitatingly, in the system of depletion; when at length, after a given portion has been obtained, a few additional ounces will be found adequate to produce a most evident abatement; and sometimes even, in co-operation with the auxiliary measures hereafter recommended, the complete removal of all the distressing symptoms of the disease. In confirmation of this statement I may add, that patients afflicted with morbid sensibility of the eye to an

extreme degree, have represented to me their despair of obtaining relief, from having, as they informed me, very assiduously adopted, but without success, the plan proposed in the following Treatise. In these well-marked instances the malady has been speedily conducted to a favourable issue, by a perseverance simply in the same course of treatment which had failed in other hands, solely in consequence of its having been prematurely abandoned, or carried on with too much timidity.

ON
THE MORBID SENSIBILITY
OF

THE EYE,

&c. &c.

CHAP. I.

SYMPTOMS AND CAUSES OF WEAKNESS
OF SIGHT.

By simply inspecting the Eye, it is scarcely possible to recognize the existence of this complaint, as there is no unusual fulness of the vessels of the conjunctiva, no apparent affection of the ciliary glands, nor the least *visible* organic derangement. The characteristic symptoms are, a morbid sensibility of the eye to light, and different kinds of ex-

ternal stimuli; according to the accurate observation of the late venerable Dr. Heberden, “ Oculi si vel levissime sint imbecilles, quamvis *nullam morbi notam præ se ferant*, ægre patiuntur ventum, ignem, pulverem, aut lectionem.”* — A strong glare of light is always painfully distressing to the patient; and hence, in aggravated cases of this disease, the effulgence of the sun’s rays when admitted to the eye, excites in it a very acute sensation, which is accurately referred to the bottom of the orbit; around which there is, at the same time, a sense of tension and oppressive uneasiness, which is considerably increased by external pressure. For the same reason, the patient is miserably uncomfortable

* Heberden, Comment. de Morbis Oculorum.

in a brilliantly illuminated apartment. In order, therefore, to exclude the strong and direct rays of light, he instinctively depresses his eye-brows, or applies his hand to his forehead, viewing objects with the palpebræ half closed, by which he is apt to acquire the habit of blinking.* If he attempt to read, or look at small or bright objects, he is soon dazzled, and his vision becomes confused, which, added to the pain the effort occasions, speedily compels him to desist. The iris acts with great energy on the admission of the rays of light to the retina, and in consequence, the pupil be-

* I am assured by an intelligent and learned traveller, that the inhabitants who reside at the foot of the Glaciers in Switzerland, acquire this habit in a remarkable degree, in consequence, probably, of the vivid light that is reflected from the fields of ice and snow, to which they are perpetually exposed.

comes contracted to a very small aperture; a *striking symptom* of this disease. When the stimulus of light affects the eye, there is sometimes, though very rarely, a manifestly deficient action of the lachrymal gland; but much oftener the secretion of tears is abundantly copious,* which is, indeed, the principal cause of the confused vision occasionally attending this malady.

General *debility*, however induced, though not essential, seems greatly to *predispose* to this complaint. Hence its most frequent occurrence to persons recovering from previous illness, and to

* Many people amongst the Æthiopians, Africans, &c. who have an extreme degree of tenderness of sight, owing to the great brilliancy of the sun's rays, suffer exceedingly, according to Haller, (Tom. v. p. 490) from violent epiphora, or watery eye, which, in fact, renders them nearly blind during the day.

those of a relaxed habit. Although I have witnessed it in both sexes, yet the female, for the causes just specified, seems most obnoxious to its attacks; which may take place at all periods of life. Preceding ophthalmia,* whether acute or chronic, gives the organ a great susceptibility to this disease on the application of very slight exciting causes; such as the long, or frequent exposure of the eye to a very vivid, or reflected light, and its excessive exertion in reading, or viewing minute and dazzling objects.

The *proximate cause* of this weakness of sight, *instead of local debility*, I will hazard the opinion, consists in an *exqui-*

* I have repeatedly ascertained, that measles and small-pox, as well as the Egyptian ophthalmia, have laid the foundation for the subsequent attacks of this disease.

site sensibility of the retina, the effect of a great turgescency, or an inflammatory action of the blood vessels of that membrane; the choroid and iris being probably only sympathetically and secundarily affected. "Intolerantia lucis," says Sauvages, "retinæ sensibilitatem adauctam esse probat, sive detur ejus infarctus phlogisticus, sive tensa sit nimium choroidea, ejusque expansio uvea."

As the inspiration of cold air excites cough, and increases irritation, during the inflamed state of the lungs, though at other times it promotes only their healthy action; so a moderate quantity of the rays of light impinging upon the retina, when unaffected by disease, produce all the phenomena of vision without uneasiness. But, being applied to this highly nervous and vascular tunic, when either in an actually inflamed, or at least in a morbidly

distended and consequently irritable condition, they then excite the distressingly acute sensation so characteristically descriptive of weakness of sight; their stimulus probably inviting an additional afflux of blood to vessels already preternaturally turgid.—We well know, from a multitude of familiar instances, that irritating substances universally induce a determination of fluids to the part to which they are applied, “*Humores fluunt ad punctum irritationis*,” says Cullen. An irregular and partial distribution of them, is also more especially apt to take place in *weakly* constitutions. And is not pain the invariable consequence of an over-distention of the living fibres, the intensity of which will bear a proportion to the degree of their expansion, and the sensibility of the organ?

That idiopathic "weakness of sight" is actually and primarily a disease of the retina, may I think be inferred from the nature of the exciting causes; from the painful state and deranged function of the eye, produced by the stimulus of light striking on that tunic (the esteemed seat of vision) rendered preternaturally sensitive by the distension, or inflammatory action of its vascular texture; and from the absence of several of those symptoms which more particularly characterize an organic affection of the choroid, and iris.

I may likewise add, that a great aversion to light (though not particularly noticed by all authors on the subject) is amongst the earliest symptoms of hydrocephalus internus; a disease well ascertained to proceed from an inflammation

of the serous membranous lining of the ventricles of the brain, which frequently extends to the thalami nervorum opticorum, from whence the origin of the optic nerves is derived. Nor is there at that early period of the latter disease, any external ophthalmia, or visible fulness of the vessels of the conjunctiva; which circumstances make the analogy between the *cause* of the above named symptoms in the two complaints, very striking and satisfactory.

Let us further observe, that an intolerance of light frequently succeeds to the operation for the extraction of cataract, arising frequently from inflammation of the deep seated membranes* of the eye,

* Si æger post aliquot, ab hac operatione, dies moriatur, inveniuntur vasa choroidea rubra, infarcta, et quandoque vitrum in gelatinam puriformem mutatam.—Sauvages's Nosol. Method. p. 67.

excited by the injury inflicted in withdrawing the lens through the iris.*

This is enough to show, that inflammation in any of the posterior tunics of the eye, or even in the ventricles of the sensorium, communicating to and extending along the tractus opticus and optic nerve to its expansion in the retina, induces great tenderness of sight; and likewise, that a similar effect is produced by the inflammation of the internal membranes of the eye, in consequence of the operation of extracting the opaque lens in cataract,

* The operation originally proposed as a substitute by my friend and preceptor, the late ingenious Mr. Saunders, (the only description of which, *in his own words*, is contained in my Treatise on Cataract, together with my subsequent improvements of the process,) is calculated, in a great degree, to obviate this, and many of the dangers attendant on the extraction of a large opaque lens through a small, or contracted pupil.

and that such an effect is produced without any *external* appearance of disease in either instance.

Let us next inquire, whether the rays of a vivid light, falling upon the eye, may not produce the same effect ?

That *excess* of light really acts by expanding the vessels of the retina, and thus excites pain, inflammation, and occasional blindness, is rendered demonstrably clear in the case of Albinos. The well-known exquisite sensibility of their eyes is, doubtless, owing to original and incurable malconformation of the organ, characterized by a want of the pigmentum nigrum ;* in

* M. Blumenbach, Professor in the University of Gottingen, is of opinion, that the *redness* of the iris and the internal parts of the eye, as well as the *extreme sensibility* accompanying that redness in Albinos, is owing to the total privation of that brown or blackish mucus, which about the fifth week after conception, covers all

consequence of which defect, the rays of light, not being duly absorbed, impinge with full force on the unprotected retina. Hence, every unusual access of light occasions, not only pain, but likewise an increased fulness of the blood vessels, which shows itself, by a deeper red or ferrety

the interior parts of the eye in a sound state. He adds, Simon Pontæus, in his Treatise "*de Coloribus Oculorum*," long ago remarked, that in *blue* eyes, he found the interior membranes were less abundantly supplied with black mucus, and were therefore more sensible to the action of light. "This insensibility of blue eyes agrees very well," says he, "with northern people during their long twilight; while, on the contrary, the *deep black* in the eyes of negroes, enables them to support the splendour of the sun's beams in the torrid zone." The above observations of Blumenbach are detailed in a Memoir to the Royal Society of Gottingen. M. Buzzi, published a very interesting Memoir in the *Opus, Sult. de Milan*, 1784. tom. 7. p. 11; in which he demonstrated, by dissection, what Blumenbach had only supposed; the iris also was found perfectly white, and the pupil was of a rose colour.

appearance at the *bottom* of their eyes.* And if the application of the light be continued, temporary blindness follows; owing unquestionably to the excessive accumulation of blood upon, and consequent dilatation of, the deep-seated vessels of that organ. And is it not probable, that the Amaurosis, so frequent in hot, as well as in those northern regions which are covered for the greater part of the year with snow, is owing to the reflection† of the rays of the sun,

* The same, however, was established before that time, viz. in the year 1802 or 1803, in the dissection of the eyes of *white* rabbits, by the late Mr. Sheldon, in company with Dr. Jonathan Stokes, and the late Dr. Adams.

† The great danger to the sight from being obliged to look upon bright luminous objects, is strikingly exemplified by the frequency of blindness in the oriental regions, where

“ ————— vertical the sun

Darts on the head direct his forceful rays;

acting in a similar manner; in one instance from the burning sands, in the other from the snow?

In vain the sight, dejected to the ground,
Stoops for relief; thence hot ascending steams,
And keen reflection, *pain*." THOMSON.

Great numbers of the equinoctial Asiatics in the day time shew the *white* of the eye only, the pupil being hid under the eye-lids, lest the rays of the sun reflecting strongly on the sand should pain, or materially injure the sight.

Nor is total loss of sight an uncommon incident among the inhabitants of the more northern latitudes, where the earth is, during the greater part of the year, enveloped in continual snow. Xenophon relates, in a passage which Mr. Boyle thought worthy of quoting, vol. I. p. 698, "that Cyrus marching his army for divers days through mountains covered with snow, the dazzling splendour of its whiteness *prejudiced* the sight of *many* of his soldiers, and *blinded* some of them; and other stories of that nature may be met with in writers of good note." To obviate the alarming, and often suddenly destructive influence of too much reflected light, (when the sun is above the horizon during spring) the cautious traveller finds it expedient to cover his eyes with black crape. Experience has also taught the unlettered

savage the rude invention of framing a little wooden case, (called by the French settlers near the Esquimaux of Hudson's Bay, *Yeux à la neige*,) with only two narrow slips, which he wears over his eyes, in order to secure them from the well-known and dreaded effects of an excess of light.—Voyez l'Histoire Générale des Voyages par la Harpe, in 8vo. vol. 14. p. 214; also Ellis's Voyage to Hudson's Bay.

CHAP. II.

ON THE PROPER DISTINCTION BETWEEN
WEAKNESS OF SIGHT ABOVE DESCRIBED,
AND OTHER COMPLAINTS WITH
WHICH IT IS SOMETIMES
CONFOUNDED.

THE disease termed by Hippocrates, amblyosmos; by Aretæus, amblytes; by Aëtius, visus debilis; by Boerhaave, visûs hebetudo; and by some French writers, vuë-confusée, faiblesse de la vuë, and mauvaise vuë; is not to be understood the same complaint which is described in this Dissertation, under the name of *weakness of sight*, but rather an indistinctness of vision, or absolute and complete ambliopy.*

* Ambliopia est visûs debilitas sine admodum visibili

But as this complaint, which should more properly be called *dulness*, is too often confounded with *weakness of sight*, it is necessary I should say a few words on the subject, in order to render the distinction more clear.

Dulness of sight does *not* depend on an *excess*, but a *positive want* of *sensibility* in the *retina*. The principle symptoms are, not only frequent alterations in the precise limits, but also a great indistinctness and confusion of vision; under all circumstances of time and place. The eyes, if much exerted, soon become fatigued, which renders it necessary, every now and then, to

oculi vitio. Myopes et presbytes in certâ objecti distantîâ solummodò confusè vident: nyctalopes et hemeralopes certo diei tempore tantùm malè vident, àt ambliopes in quâvis distantîâ, et quôvis diei tempore, objecta debilitèr discernunt. Plenck, Doctrina de Morbis Oculorum, p. 186.

close and gently rub them, when the patient can again see somewhat better for a short time. The eyes appear dull and inanimate. The iris, which is more or less dilated, is susceptible of very feeble, oftentimes scarcely any motion, even on the sudden exposure to a strong light, which, though vivid, occasions scarcely any uneasiness. This malady is most apt to attack persons who are past their meridian; and has generally been brought on by the too frequent use, or rather abuse, of the organ, co-operating with other causes which have a tendency to debilitate the system. The disease not unfrequently remains almost stationary for a great length of time. In other instances its progress is much more rapid; in which last case, it generally terminates in complete gutta serena, or total blindness.

Various and extremely contradictory remedies have been recommended by oculists for the cure of this very formidable complaint ; which, however, I shall forbear at this time enumerating. The first thing to be attended to is, to allow the eye as much rest as possible, and to avoid particularly what may be considered the exciting causes of the disease. It is, I believe, in many cases absolutely incurable : and the only remedies which I have ever known to prove beneficial, are topical stimulants, as* electricity, galvanism, æther, infusion of

* I think it consonant with the present discussion to remark, that some cases which were deemed instances of gutta serena, I have ascertained to be examples of actual dulness of sight, and that they derived the most essential assistance from the application of the electric and galvanic influence. And I cannot forbear to add, that a few cases of blindness, which have fallen under my observation, and which were likewise ascribed to a paralytic state of the optic nerve, were altogether sympathetic affections, de-

capsicum, rubefacients applied to the palpebræ, &c. whereas, in *idiopathic weakness* of sight, these means are certainly useless, some of them highly hazardous. Internally too, mercurials given so as slightly to affect the mouth, together with the arnica montana, and deobstruent medicines, have sometimes been productive of benefit. Double convex glasses, by concentrating the rays of light, never fail to afford, in this case, considerable assistance to the sight.

It is this particular species of disease to which I presume Mr. Ware alludes in the following passage : “ I cannot omit to mention,” says he, (vol. I. p. 122,) “that in instances where the eye has been parti-

pending upon visceral irritation ; by the removal of which the patient has obtained a complete cure. Of the latter description are the successful instances of amaurosis, related by Richter, Schmucker, and Scarpa.

cularly weak," (a term he seems to me to employ in too indefinite a sense,) "without any perceptible cause to produce it, the application of spirituous remedies that have been highly rectified, such as the medicine sold at Riga, under the name of the Riga balsam, or the æther of the London Pharmacopœia, either alone or mixed with an *equal proportion of sugar and water*, has sometimes been greatly useful. In a few instances also, the excitement of a violent inflammation, by the application of other stimuli, has been found of use to overcome the enfeebled action of different parts of the eye."

Dulness of sight again differs from the glaucoma, as there is not that deep-seated grey appearance, or shining pearl colour, observable in the latter complaint.

I am well aware, and have met with

many examples of a slight species of psorophthalmy which, if only cursorily regarded, seems in some respects, nearly to resemble weakenss of sight. And as Mr. Ware appears, from the cases he has published, to have identified it with the complaint under consideration, I think it necessary to dwell a little upon this topic, and to show, by contrasting their respective symptoms, and the different modes of cure they require, that they are perfectly distinct ailments. The description of this affection of the ciliary glands is so accurately given by that respectable author, that I shall transcribe his words, and subjoin a few remarks in support of my opinion.

“ The psorophthalmy,” says Mr. Ware, (Chirurgical Observations relative to the Eye, Vol. I. p. 116,) “ not unfrequently

occurs, without producing the slightest appearance of inflammation, either in the eye, or eye-lid. I have attended a very considerable number of such cases; and in many, the only intimation of the nature of the complaint has been derived from the description given by the patients themselves. Whenever I am informed that the edges of the eye-lids have a disposition, be it ever so slight, to adhere to each other after they have been long in contact, as during the time of sleep, and when this is accompanied with an uncomfortable sense of weight in the lids on the approach of night, in consequence whereof the patient involuntarily shuts them without being drowsy, and without any particular stimulus being applied to the eye to give it pain, I always suspect that the secretion of the ciliary glands is in a diseased

state; and in many such cases, I have found the success attending the use of the unguentum hydrargyri nitrati, recommended for the cure of this disorder, quite as effectual as in those other instances, where the excoriation and redness of the eye-lids have been visible on the slightest inspection."

There are, however, several symptoms above mentioned, which decidedly characterize that species of diseased ciliary glands alluded to, and which serve at all times to distinguish it from the subject of this Dissertation.

In the complaint in question, the meibomian glands perform their functions in the most perfect manner, consequently there is not any sense of weight of the palpebrae towards the close of day, inducing a propensity to shut them, independently of drowsiness or uneasiness,

nor is there any adhesion of their edges during the night. Hence, the application of mercurials to the tarsi, which are almost specific in the psorophthalmy, are absolutely useless, often prejudicial in weakness of sight. Besides which, the acute pain excited by the admission of a vivid light to the eyes, in cases of the latter disease, furnishes a striking discriminating feature, sufficient to point out a decided difference between weakness of sight, and the above described slight species of psorophthalmy.

It may perhaps be urged, that bad cases of that kind are often attended with a high degree of tenderness, or morbid sensibility of the eyes ; a fact that cannot have escaped the attention of practitioners. But in these more inveterate instances, there is a considerable apparent

inflammation, thickening, and often ulceration of the edges of the eyelids, accompanied with an ill-conditioned secretion from the ciliary glands, which by its irritation keeps up a constant, more or less violent ophthalmia. In these cases, the inflammation seems continuous, extending itself from the margin of the tarsi along the palpebraic to the corneal conjunctiva. Even in this instance, however, I conceive that the intolerance of light does not arise (at least only sympathetically) from an affection of the retina, but rather from the cornea* itself, which, like the ligaments and cartilages, is known to acquire considerable sensibility when affected with inflammation.

* Dr. Vetch, in the Medical Journal, has offered some ingenious observations in support of this hypothesis.

But this aggravated form of the disease is so very manifest on the slightest inspection, that it never can, except by the most ignorant, be mistaken for absolute weakness of sight.—Yet it may be right to add, that I have seen the particular species of psorophthalmy above pointed out, more than once complicated with weakness of sight. But this combination seems to be accidental; although Mr. Ware's mode of expressing himself would lead us to believe that he considered the *two* as constituting only *one* disease. As a proof, however, that they are really *distinct* ailments, the concomitant affection of the retina, does not yield to the same mode of treatment, which almost invariably proves successful in the slightly diseased state of the tarsal glands; but after the cure of the latter, requires the adoption

of the plan of cure hereafter recommended.*

Having now said every thing which appears to me necessary in regard to the diagnostic symptoms of idiopathic weakness of sight, as well as of some other diseases with which it is liable to be confounded, I shall proceed to detail what has been found, by my own practice and experience, the most successful mode of cure.

* Very lately, and similar cases have often occurred in the case of my practice, a young lady consulted me for the above described complicated ailments. By the aid of leeches to the under eye-lids, and other remedies, with a low diet, the weakness of sight was speedily subdued. The subsequent local application of a mercurial preparation to the edges of the tarsi, also wholly removed the diseased state of the ciliary glands, and restored my patient to perfect health.

CHAP. III.

ON THE CURE OF WEAKNESS OF SIGHT.

Medico diligenti priusquam conetur ægro adhibere medicinam, non solum morbus ejus cui mederi volet, sed etiam consuetudo valentis, et natura corporis, cognoscenda est.—CICERO.

THE instances of weakness of sight which occurred in the early part of my ophthalmic practice, were marked with great constitutional delicacy, and the individuals had most clearly brought on the disease, either by excessive attention to fine dazzling work, or by inordinate indulgence in literary pursuits, protracted frequently to late

hours. The knowledge of these facts impressed my mind most forcibly with the belief that a morbid sensibility of the retina, the effect of exhausted nervous energy, constituted the very essence of this complaint. Agreeably to this opinion, I endeavoured to combat the symptoms by the external application of sedative and tonic, and by the internal exhibition of corroborant and nervous remedies. I had, however, the mortification to find, that this treatment was not only ineffectual, but in some instances, even absolutely detrimental.

Repeated failures at length made me more sceptical as to the correctness of the prevailing idea relative to the proximate cause of weakness of sight; which, added to the arguments already adduced in a former part of this work, led me to

believe that the exquisite sensibility of the eye might, with more probability, be the result of an inflammation, or at least highly turgid condition of the blood vessels of the retina. In the hope of having my doubts resolved, I consulted Mr. Saunders respecting the nature and best mode of treating this complaint, who replied, "that he did not feel himself at that time prepared to give me a satisfactory answer, as he had not sufficiently considered the subject."

Left thus to my own suggestion that the indications of cure must consist, not in giving additional tone by the use of cold astringent applications, and internal strengthening medicines, but in lessening the plethoric state of the vessels of the posterior membranes of the eye, and in obviating, at the same time, the extreme

sensibility of the retina, no means remained but to ascertain, by slow and cautious experience, the validity or fallacy of my conjectures.

In a very short time my mind was relieved by being consulted in a case, in which the tonic system had been ineffectually tried by others. My patient was a lady of distinction, whose vision, in spite of the most able professional skill, had grown gradually worse, and was now become so distressingly weak, that she could not endure the glare of a lighted candle, nor without considerable uneasiness the ordinary light of day. The first symptoms probably were induced by the injurious practice to which she was much addicted, of amusing herself with reading, drawing, and fine needle-work, by candlelight. There was not the slightest tendency to

psorophthalmy, nor any visible fulness of the vessels of the conjunctiva. My patient was past her meridian, of a very delicate frame of body, and her general health was greatly impaired by having been the mother of a large family, and by consequent repeated indispositions.

Being informed that tonics, in various forms, had been liberally, but altogether uselessly prescribed, notwithstanding this case did not, in many respects, afford the most favourable example for the adoption of the system of depletion, the total inefficacy of the opposite, justified the deviation, and determined me to give it a cautious trial.—I directed six leeches to be applied to the lower eye-lids*, a small dose of hydrarg:

* The application of leeches so immediately in the vicinity of the eye, has been pointedly reprobated by a

submur: at bed-time, and an aperient draught the next morning, the eyes to be fomented, morning and evening, with chamocela.

A celebrated author on ocular complaints, "because," says he, "they have sometimes been found to occasion a considerable swelling of the lids, and have also for a time increased, instead of lessened the irritation of the eye. In order to prevent which mischiefs, it will be proper to apply the leeches to the hollow of the temple." In a very large number of cases in which I have known them applied to the lower eye-lid under the direction of the late Mr. Saunders, as well as under my own, I have indeed sometimes witnessed the effects above alluded to, especially in highly irritable states of the skin, in which cases the same consequences are occasionally apt to supervene from the application even of a blister. But I am convinced, from the fullest observation and experience, that the benefit the patient derives from leeches, when placed as near as possible to the inflamed eye, infinitely exceeds what the same number are capable of yielding, when applied to the temples, and more than compensates for the greater degree of ecchymosis, or temporary discoloration of the eye-lids, which constitutes the principal, if not the only real objection against their application to the lower eye-lid; an effect which is speedily removed by a lotion of diluted vinegar and brandy, of sp. ammon. c. laudanum and water, or still

mile and poppy-head infusion, and immediately after being well dried, the tinctura opii mitis of the annexed formula; during the day, a collyrium of plumbi superacetas made warm;—to all which, a shade over the forehead, and an anti-phlogistic regimen were added. As the eyes were dry, I also directed the vapour of spirit ammon. com. to be applied in the manner hereafter described.—The loss of blood by the leeches, though by no means considerable, depressed my patient a good deal: and the following day she felt more enfeebled by the only moderate operation of the opening medicine; circumstances clearly indicative of very delicate stamina. However, she had the gratification more rapidly by the juice of Solomon's seal, (*Convallaria multiflora*, LIN.), the remedy used by pugilists to remove *blackness* of the eye-lids.

to find, that the eyes were astonishingly relieved by the evacuations, and that she was capable of bearing a somewhat strong light, with only trifling inconvenience.

Thus convinced of the propriety of my new plan, I directed the hydrarg: submur: and draught to be repeated in three or four days, and in the mean time that she should persist regularly in the use of the other measures above described. By so doing, she was soon relieved of the extreme tenderness of sight; after which the cure was completed, by employing only the fomentation and tincture, with the use of restoratives, and occasionally some aperient pills of rhubarb, aloes, and soap, and a tonic lotion containing zinci sulphas, &c.

Another lady, about twenty-five years of age, of a constitution the most ex-

quisitely irritable and delicate, soon afterwards applied to me on account of an extreme weakness of sight, which had existed for many months, and had been brought on by a very close attention to *fine needle-work*,* and *reading a great deal by candle light*.†

Although I felt considerable encouragement to proceed upon the same plan which had proved so successful in the case

* "I have known," says Dr. Rowley, "instances of a *contracted pupil*" (indicative of the *active*, and not the *exhausted*, state of the retina, in which case the pupil would be *dilated*), "*causing blindness, from too close an attention to fine needle-work.*" Treatise on Diseases of the Eyes, &c. p. 357. "Such minute or long continued work *irritates* the eye, and *irritation attracts an accumulation of fluids.*" Ibid. p. 340.

† Tranka (Historia Ophthalm. p. 24.) quotes the case of a young man so given to *reading by candle light*, that he brought on a violent inflammation of the eyes, which resisted every remedy, and at last terminated his life.

just related, and under circumstances too very similar, yet I confess I scarcely dared to adopt it, in consideration of her excessively nervous habit of body. However, as the usual cordial and tonic measures had, as in the former instance, been already tried, without any beneficial effect, I at length ventured to direct only four leeches to be applied to the eye-lids, together with the remedies above specified. The depression produced by these gentle means was, notwithstanding, equal to what occurred in the foregoing case, and the result was not less satisfactory. She assured me, that the effect of the leeches was like a charm, for the violent pain, which she never failed to experience on exposure to a strong light was, in a great degree, subdued by this single application, on which account it was unnecessary to

repeat them. By the continued use of the fomentation and tincture, night and morning, the collyrium during the day, and the occasional employment of aperient pills, the remaining weakness of sight was in a short time removed, when a tonic lotion was prescribed for the eyes, and some bark internally, with a view to prevent a relapse.—This plan completely answered the purpose, as I learnt many months afterwards, that she continued perfectly well in regard to her sight.

The preceding cases are adduced to show how immediately efficacious the evacuating system has proved, under circumstances which are generally treated in a very different manner. Such extreme cases are, it must be confessed, but seldom met with in the ordinary routine of professional practice. Had, however, the impatience

of the eye to light in these very violent instances originated from pure debility, or the exhausted energy of the retina, must not the plan adopted necessarily have exasperated the symptoms? But since, on the contrary, it proved so very effectual in constitutions too ill calculated to bear a further reduction of strength, does it not, *à fortiori*, furnish a most convincing argument in favour of the theory advanced, relative to the nature and cause of weakness of sight? And may we not infer its greater applicability to subjects of less delicate stamina? Accordingly, I have observed the same happy result from a similar method of treatment, in several instances of this disease, in persons whose constitutional vigour enabled them to endure the requisite evacuations, without too experiencing any of the debilitating effects above enumerated.

It would be uninteresting to detail all the instances of this disease which have fallen under my care; I shall therefore content myself with selecting the two following from my case-book.

In December 1809 I was consulted by James Newman, a young man engaged in the silk stocking manufactory, (a fruitful source of this complaint) by close attention to which, his eyes were become so exceedingly weak and painful on exposure to a strong glare of light, either from the sun, candles, or any glittering objects, that for many weeks previously to his application for my assistance, he had been thereby rendered, in a great measure, incapable of discharging the duties of his employment. After the most minute examination of his eyes, I could not distinguish the slightest external ophthalmia, nor any

symptoms indicative of an affection of the ciliary glands. And in every other respect he was in a good state of health, though of a delicate constitution; clearly evincing, that his complaint was purely local. I felt therefore convinced, that this was a genuine instance of weakness of sight, originating from a too great determination of blood to the vessels of the retina, in consequence of the irritation excited by a very intent inspection of the dazzling silk.

Impressed with that idea, I directed six leeches to be immediately applied to the lower eye-lids, four grains of hydrarg: submurias to be taken at bed-time, and an opening powder the following morning; to foment the eyes every night and morning with water as hot as he could bear it, and then to apply to them some of the *tinctura opii mitis*; to wash them se-

veral times a day with a warm saturnine lotion; to abstain from his work, as well as from all animal food and fermented liquors; and lastly, to protect his eyes from strong light by means of a green shade. With these directions he withdrew, and returned in a week to inform me that all the remedies, but particularly the leeches which gave him immediate ease, had been eminently useful to him, his symptoms having already greatly subsided. I directed the hydrarg: submur: and opening powder to be repeated; also a solution of antimonium tartarizatum with magnes. sulphat; to be taken in the intermediate days, in order to reduce arterial action, and keep up a determination to his bowels. He was desired to adhere most punctually to the plan before described.

After this interview he did not call upon

me again till a fortnight had elapsed, when my notes add, eyes “apparently well, can bear light freely, and without pain.” A tonic collyrium was then prescribed, and the bark, and a liberal diet, together with some opening pills to be used occasionally, substituted for the former remedies, which, in a short time, so completely restored him, that he had no occasion for further medical assistance, but was enabled to prosecute his labours with his usual assiduity and success.

The following case is not less illustrative of the symptoms, and the utility of the evacuating and antiphlogistic mode of treatment in idiopathic weakness of sight.

A young gentleman who was preparing for the clerical profession, called upon me in the beginning of April 1810, to

consult me respecting an extreme weakness of his eyes, which had become so exceedingly troublesome, that he was incapacitated from prosecuting his studies with either comfort, or effect. I understood he had been occasionally subject to the complaint ever since the small pox, which he caught when an infant. The present attack had been of some months duration, and had bidden defiance to topical astringent applications, as well as to an ointment, containing some mercurial preparation, and other remedies and applications, with the nature of which I am not particularly acquainted. An eminent oculist also in London was consulted, who declared it to be a species of psorophthalmy, and prescribed accordingly. However, as the eyes, when I saw him, were so exquisitely irritable, as to

be unable to bear any strong light, especially the glare of candles, and still less the vivid rays of the *sun*,* without *acute pain*, and a copious effusion of tears; as the iris, when thus exposed, acted with astonishing rapidity and vigour; and as there was not any general indisposition, any visible ophthalmia, nor any morbid affection of the ciliary glands, I did not hesitate to pronounce the disease to be a well marked case of idiopathic weakness of sight. Agreeably to this opinion, I directed six leeches to be applied to the lower eye-lids, a dose of hydrarg: submurias at bed-time, and a cathartic next

* This gentleman, as well as all my other patients who were afflicted with weakness of sight, could bear the light emanating from a *candle* infinitely better than the brilliancy of the *sun's rays*. This is not surprising when we consider that, according to Euler, the light of the *sun*, compared to a *candle*, is as 11,664 to 1.

morning; the eyes to be fomented, night and morning, with hot water, and afterwards some of the *tinctura opii mitis* to be applied. He was requested to forbear from his literary pursuits; to confine himself to a slender cooling diet; in the day-time to wear a green shade; and frequently to apply to them a weak saturnine lotion made warm.

The above measures were faithfully adopted; and on the third day he again favoured me with a visit, and expressed the liveliest gratitude and satisfaction for the equally remarkable and speedy relief he had already derived; for the pain had nearly subsided, and he could bear the impression of light with little comparative inconvenience.

The effect of the leeches was, he assured me, very striking; for he found his

eyes easier, directly after the bleeding from them had ceased. The hydrarg: submur: and purgative were ordered to be repeated, and also a solution of antim: tartar: et crystalli tartar; three times a day, so as to keep up a constant moderate determination to the bowels. In four days afterwards he again called upon me and said, he felt not any pain except from very vivid light. The iris acted with sufficient energy, but not in the violent manner it did when I first saw my patient. As I was on the point of leaving the country, I prescribed one more dose of hydrarg: submurias, and a purgative, to be taken in the course of the following week, desiring him still to persevere, during that period, in the use of the saline aperient.

In the event of all pain of his eyes having

by that time completely subsided, on the admission even of a strong light, then to have recourse to a tonic collyrium, and a restorative regimen, with bark. A few weeks afterwards I found him still mending; and as I did not afterwards hear from him, which he promised I should in case of a relapse, I doubt not that the cure was completed, and remains permanent.

It may be right to add, that in vigorous subjects, the plan of treatment by depletion must be pushed to a greater extent, in order to insure a complete restoration, than in persons of debilitated habits, in whom the symptoms are in general easily and very rapidly subdued. For a degree of fulness in the retina, great enough in irritable habits to excite all the symptoms of idiopathic morbid sensibility of the eye, is sufficiently diminished by

a *small loss* of blood, added to other means of counter-irritation; and to carry evacuations beyond what is absolutely requisite for the removal of the intolerance of light, would unnecessarily weaken the patient.

CHAP. IV.

THE SUBJECT ILLUSTRATED.

It will, I think, add not a little to the weight of my observations and practice, to subjoin the two following well marked cases of this disease, extracted from the interesting collection published by Mr. Ware;* because they not only exemplify its causes and peculiar symptoms, but likewise confirm the efficacy of the mode of treatment so strongly urged in this publication. They must also prove the more satisfactory, inasmuch as they are

* "Surgical Observations relative to the Eye." Vol. I. p. 160.

not related with a view to establish any favourite, or preconceived theory.

The first case which I shall transcribe is the seventh, and is defined “Weakness of sight, resembling that produced by an ophthalmy, without visible imperfection of the eye, much relieved by leeches.”

“In the year 1797, Mrs. C. a lady about thirty years of age, who lately returned from the East Indies, applied to me on account of an extreme weakness of sight, which was accompanied with a considerable degree of *general debility*, and appeared to be occasioned by her having had children very fast in a hot climate.

“On an accurate examination, I could not perceive *the least defect in the appearance of either eye*. Suspecting, however, that there might be some degree of *acri-*

mony in the secretion of the ciliary glands, I applied the citrine ointment to the edges of the eye-lids two or three days in succession, as in common cases of psorophthalmy, but it did not afford her any assistance.

“On extending my enquiries relative to her health, I was informed that in the early part of her life she had experienced *more relief from the application of leeches than from any other remedy.* Notwithstanding *her weak state, and the total absence of inflammation, I therefore recommended her to put two leeches to each temple, to apply a blister behind, or rather above one of her ears every three or four days; and as cold applications were very uncomfortable to her eyes, to apply to them, morning and evening, the corner of her handkerchief dipped in chamomile tea, as hot as it could*

be pleasantly borne, wiping the lids dry after it was used, and embrocating them, as well as the temples and forehead, with an infusion of elder flowers in camphorated spirit. With this advice the lady left me and went into Hampshire; and, in about a month, she wrote to inform me, *that the leeches had afforded her immediate relief, and had several times been repeated,* that the hot chamomile tea was a very grateful application, and her eyes were become quite strong during the day, experiencing only a very small weakness, when she exposed them to very strong light, or worked or read much by candle-light."

The foregoing history affords, I think, an assemblage of the most unequivocal symptoms of the morbid sensibility of the eyes, originating from too great a determination of blood to the immediate seat

of vision. For, on this supposition alone can we account for the speedy relief afforded by topical evacuations.

The next case I shall take the liberty to quote, is the tenth of Mr. Ware's collection, and is denominated, "Weakness of sight with pain in the head, and falling of the upper eye-lid, without visible Ophthalmia, cured by leeches."

"A few years ago, a young lady about twenty years of age came under my care, on account of *such an extreme weakness of sight*, that she could not bear either the light of the day, or that which is given by candles, *without extreme uneasiness*; and her eye-lids fell constantly so low over the eyes, that the cornea was scarcely visible at any time without the application of the finger to raise them. This was accompanied with a constant pain in the head,

which was particularly severe in one spot over the forehead, which the patient could cover with one end of the finger. The debility and pain had continued many weeks, and was supposed to have been occasioned by too close application to minute painting, the young lady having excelled so much in this art, as to have been honoured by the gift of several medals from public societies of artists. Her countenance, with the exception of the fall of the eye-lids, denoted perfect health, there was no humour in any part of the skin, her pulse was good, and all the evacuations were continued in the most perfect manner. The application of the *citrine ointment* afforded no kind of relief. Electricity, though applied in the mildest manner, *increased the weakness*, and made her head more painful. *Strengthening remedies* and

strengthening applications of various kinds had been tried under the directions of an eminent physician, *as well as under my own, without affording the smallest relief.* It was one time suspected that some disease might exist in that particular part of the head which the young lady described as suffering most on every accession of light to the eyes; and in consultation with Dr. Saunders, it was agreed to make a circular incision upon this part, quite through the pericranium, and sufficiently large to include the whole that was described as suffering the chief pain. A portion of integuments, nearly as large as a half-crown piece, was accordingly removed ; but no morbid appearance was discovered either in the cranium or pericranium. The young lady, however, experienced much ease after the operation ; her eye-lids opened more

widely, and the access of light did not give so much pain. She continued better about a week, but after this time the pain and weakness returned in a degree quite equal to that she had before experienced. It was now suspected, that the relief she received from the operation was chiefly occasioned by the loss of blood that attended it.* It

* It is a curious fact, and well worthy observation, that the Greenlanders are in the constant habit of making an incision across their foreheads for the cure of a complaint in their eyes (which, from the vivid reflection of the sun's rays upon the snow and ice at certain times of the year, is epidemic amongst them), characterized by pain in the organ, with great intolerance of light, a copious flow of tears, and occasionally redness of the conjunctiva. Experience has doubtless confirmed the efficacy of the operation, although their ignorance of the animal economy, and of the nature of the disorder, does not enable them to explain the principle upon which the loss of blood occasioned by the incision, proves so certainly beneficial. However, the above facts point out most satisfactorily, that *light operates by increasing the action of the vessels of the visual*

was therefore agreed to apply three or four leeches on the hollow part of each temple. This was accordingly done, and *it afforded her immediate ease*, which lasted about three days; but then the pain in the head returned in nearly as great a degree as before. Six leeches were applied on the upper part of the forehead, and they again afforded great service. It being now *in some measure* ascertained, that relief was *only* to be afforded by *taking away blood* from some part *near* the seat of the disease, six, eight, and sometimes ten leeches were applied, either on the forehead or temples, once or twice every week for the space of eight or ten weeks; the relief after each application being always considerable, and the pain in the head, with the weakness of sight and falling of organ, and *not* by directly *exhausting the sensibility and energy of the retina*.

the eye-lids gradually amending; and in *about three months, without the use of any other remedy*, these distressing symptoms were all removed; and the young lady became quite free from pain, and perfectly recovered the use of her eyes."

The preceding case is, I apprehend, another well-marked instance of retinal inflammation, accompanied with a ptosis, or falling down of the upper eye-lids, and a constant pain in the head; symptoms, in my estimation, decidedly indicative of topical congestion of blood, affecting particularly the *interior* sensitive membrane of the eye-ball. That the extraordinary exertion of the eyes, in this case, should occasion an unusual determination of fluids to the seat of vision, which by distending the nervous fibrillæ, must necessarily produce acute pain, is not only a rational supposition, but is

also consistent with the known laws of vital action. And with respect to the local pain of the head, and falling of the eye-lids, there can be little doubt of an unusual plenitude of the vessels having occasioned these symptoms, which I have known to occur in two instances from a similar cause.

Strengthening remedies and applications were resorted to, but were found altogether inefficient; a *manifest proof* that the symptoms did *not* arise from *local relaxation* and *debility*. But, as the cause of all the symptoms was an accumulation of blood upon the orbits, so, by its local abstraction, those symptoms were speedily alleviated, and by the occasional use of leeches only, “in the space of *three months*, the lady became free from pain, and perfectly recovered her sight.”

The arguments and facts hitherto ad-

duced, afford, I think, the strongest presumptive evidence in favour of the supposition, that the immediate cause of weakness of sight, is a turgescency, or more or less inflammatory affection of the posterior vascular membranes of the eye. Through the friendship of Mr. Heaviside, I have had an opportunity of examining his extensive and highly interesting collection of preparations on the morbid anatomy of that organ. Amongst these, I have fortunately met with one, which appears to me fully to confirm the truth of the theory I have endeavoured to establish. The leading features of the case (which I am obligingly permitted to publish) are briefly as follow. "The man between fifty and sixty years of age, whilst labouring under a most violent and fatal attack of acute rheumatism, was seized with

a complaint of the right eye, characterized by *a great pain* in the *organ*, and fore part of the head, *excessive intolerance of light*, and *violent contraction* of the *pupil*. There was *not*, however, the *slightest external inflammation*, as the eye looked fair and well, till within two days of his death, when the cornea lost its transparency, became brown and dark, and the sclerotica inflamed. At this period the patient died; an event which afforded an opportunity of ascertaining by dissection, the actual state of the eye. Upon removing the cornea, and a portion of the sclerotica, there was found an inflammation, and extravasation of blood upon the retina, with slight ulceration, and incipient ossifications of the choroid; appearances beautifully exemplified by the preparation.

In the *early* stage of the above com-

plaint, there was a *high* degree of morbid sensibility of the eye, although the organ did not exhibit, on the most minute inspection, the smallest alteration in its figure, or complexion. The *excessive weakness of sight* in this instance, coupled with the exhausted condition of the patient, might naturally enough have been supposed to arise from an exquisite sensibility of the *nerve* of vision, *independently of vascular excitement*.

The dissection of the eye, however, proves the fallacy of such an hypothesis, and affords satisfactory evidence of a very important fact in pathology; viz. That a very high degree of inflammatory affection of the retina and choroid may exist, without discovering itself by any *external* marks of disease. Do not then the history of the above case, and its dissection, de-

monstrably prove, that weakness of sight does not proceed from what is called a purely *nervous* affection of the retina, but that it is the actual result of a greater or less degree of local turgescence, or inflammatory action of its vascular texture?

The above particulars are the more valuable, inasmuch as *weakness of sight not being a fatal disorder*, a casual opportunity of ascertaining, by examination after death, the real seat and nature of the disease, can rarely occur; at least I know not of any other example of the kind that is left on record. Dr. Baillie, in his excellent work on the Morbid Anatomy of some of the most important parts of the human body, has wholly omitted diseases of the eye. Even the celebrated Morgagni* says, "I see no observations

* Letter 13, article 21.

in the sepulchretum of *internal* inflammations of the eye, nor have I any to produce myself, except that I remember in a *blind* dog, the *retina itself* seemed *bloody* and *almost black*, so that it was very easy to conceive what might happen to the choroïdes, which, by reason of its incredible number of vessels, has sometimes appeared to me, even in sound eyes, to be of a bloody colour, and to that part of it called uvea."

Let it not, however, be inferred from what has been said, that every case of this disease will equally, and with the same facility, yield to simply local evacuations.

CHAP. V.

OTHER AUXILIARY MEANS OF TREATING
THE DISEASE, BY PURGATIVES, AND
TOPICAL REMEDIES.

BEFORE I enter on the consideration of any other curative indication, let me once more repeat, that the *topical abstraction of blood* seems to me productive of more immediate relief than any other remedy, and is the *first* with which, in my opinion, we should commence the cure. Its effects are, indeed, in general, most strikingly satisfactory. I have several times met with instances of this disease, which had existed for some years, with greater or less violence, *immediately benefitted* by a *single application* of leeches.

It may, perhaps, appear extraordinary, that, a disease of the eye can exist for so long a period without injuring, more or less, its organization; and be then susceptible of immediate relief, even from a single application of leeches. The doctrine I have ventured to advance, supposes only that the blood vessels of the posterior membranes of that organ are, from the causes already assigned, preternaturally turgid, or in a chronic state of inflammation, which we well know may exist in the conjunctiva for a great length of time, without destroying materially its texture, or functions. But the retina, during the time of sleep, enjoys perfect quiescence, and in the day-time, the patient instinctively protects the eye from an excess of light, at which times, probably, the ves-

sels recover somewhat their tone and elasticity. From the instance too of varicose veins we may infer, that vessels may remain permanently distended to a certain degree, without suffering any sensible uneasiness, or essential organic mischief; but upon a stimulus being applied sufficiently powerful to increase their dilatation considerably, pain will follow, of an intensity proportionate to the degree of their distention, and to the number of nerves entering into the composition of the affected part.

It will, I doubt not, be argued by practitioners unacquainted with the efficacy of leeches in this complaint, that as there is not any general excitement, any visible external ophthalmia, nor preternatural fulness of the vessels of the conjunctiva, they cannot be required.

But experience proves, that we must not be guided by the state of the general system, or the *actual appearance* of the *organ*. *Pain*, on the *admission* of a *strong light* to the *eye* is, in such cases, the *true* and *only indication* for the *use of leeches*; and if the sensibility of the organ subside, the disappearance of that symptom affords an unquestionable proof of their efficacy. If advantage, however small, result from their application, we may deduce a favourable prognosis, and venture to encourage the patient with the hope of his almost certain eventual recovery, by a judicious perseverance in the plan of depletion. In no instance of this disease have I had recourse to the lancet, judging that the topical application of leeches, or cupping and scarifying the temples, was better calculated to answer the pur-

pose of unloading the vessels of the eye, without running the risk of debilitating the patient by general bleeding.

I must now advert to a remedy, the employment of which, to a greater or less extent, during the actual inflammatory state of the eye, is very generally recommended by writers on diseases of that organ, both ancient and modern. It will readily be conjectured that I allude to purgatives. Hippocrates, indeed, observes, in his Aphorisms, that “a diarrhœa, or flux of the lower belly, cures the ophthalmia;” a position, the truth of which, taken in its most literal acceptation, I have seen verified in several instances, whether it occurred spontaneously, or was induced by the exhibition of medicines.—Indeed, if we duly consider the great sympathy which exists between the eye

and the primæ viæ, that in young persons especially, indigestible colluvies, or the presence of worms, is a frequent exciting cause of one species of inflamed eye, called ophthalmia verminosa, that purgatives excite a powerful counter-irritation, at the same time that they deterge the alimentary canal, and diminish the quantity and momentum of circulating fluids by preventing the chyle from entering the lacteals, and by emptying the numerous exhalents, and excretory ducts which open into the bowels, we cannot doubt of their being admirably fitted to relieve a congestion upon the organ of vision.—Are they not, indeed, universally and successfully resorted to in all cases in which the blood is impelled with unusual violence towards the head? Hence, I have felt great surprise on finding au-

thors, of no inconsiderable credit, alluding to them in terms which clearly shew, that they entertain a very humble opinion of, and little confidence in, their efficacy.

On the Egyptian ophthalmia, the ingenious Dr. Vetch has the following declaration: "So little benefit resulted from their employment, that even in the want of more efficacious means, they were not rigorously persisted in.*" Whereas, in a contagious ophthalmia which occurred at Breslau, according to the following passage, as quoted by himself, though to establish a different point, nothing seems to have been more beneficial than a diarrhœa, whether spontaneous or excited by art, "*Gravem*

* Account of the Egyptian Ophthalmia, p. 98.

epidemicam ophthalmicam, describunt medici Vratislavienses, cum vehementi capitis dolore, et cæcitatis secuturæ periculo junctam, adversus quam nil erat utilius quam profluvium alvi, sive sponte naturâ motum, sive pharmacis excitatum."

Perhaps their apparent inefficacy, as described by Dr. Vetch, may have arisen from his selection of the articles of this description. Heating, *drastic* purgatives are stated to have been employed, which are certainly improper, for, by acting with violence on the circulation, they often accelerate the blood's motion, and thus tend to increase the irritation they were designed to allay. The *mode* of employing the purgatives should also be taken into the account.

Purgative medicines as generally ex-

hibited by practitioners for the cure of acute inflammation of the eye, whether external or internal, have been given much *too sparingly*, both in regard to their *dose*, and to the *times of their repetition*. If meant to produce any decidedly good effects, they must at first be administered in a full dose, so as to excite an immediately copious evacuation, and repeated afterwards in such a way, as to keep up a constant determination to the bowels. Should the patient be of a robust habit of body, nothing is so effectual for that purpose as a full dose of hydrarg: submur: with antimonial powder, and in two hours afterwards, a sufficient proportion of powdered jalap, and double the quantity of cream of tartar in mint water, or gruel; by the operation of which, a large discharge of serous fluids is solicited, and

the vigour and activity of the general circulation is thereby sensibly reduced. In delicate constitutions, the hydrarg: submur: must be given with a more sparing hand; and in lieu of the jalap, an adequate quantity of magnesiæ sulphat. in infusion of senna, with some aromatic distilled water.

I have repeatedly observed, that though *very strong drastic* purgatives are improper, yet *gentle aperients*, in these cases, make no impression on the disease; the operation must be powerful to produce any manifest advantage. Again, in the management of this class of remedies, it is customary to allow two or three days to intervene before they are repeated, by which time the effects of the first dose have wholly subsided, and little comparative advantage is gained. On this account, I am in the

constant habit of pressing the remedy in a full dose, and as frequently as the patient can bear it; considering that the object in view is, not only to lessen the actual quantity of circulating fluids, but also to prevent their immediate re-accumulation, and the consequent distention of the vessels, upon which the inflammation depends. This purpose should be effected by the observance, at the same time, of a strictly antiphlogistic regimen, allowing only a small quantity of diluting liquids, as they tend to counteract our indications; and by interposing between the active purgative, small quantities of tartarized antimony, combined with some mild saline aperient, repeated so as to keep up a constantly moderate diarrhœa. By these means, I am bold to assert, from my own experience, that there is *no kind*

of inflammation, or fulness of the vessels of the eye, which will not be essentially relieved.

And as purgatives exhibited with attention to the above particulars, have in my hands proved highly advantageous in *every species of acute ophthalmia*, at the same time that the debility and exhaustion which might be dreaded as the inevitable consequence, are altogether imaginary evils, and by no means so great as what is certainly produced by a continuance of the disease, so I have witnessed the best effects from their use in idiopathic weakness of sight. To say the least in their favour, they most unquestionably render the *repeated loss* of blood less, and indeed in some instances, not at all necessary. When the patient from any particular prejudice, is extremely averse to

leeches, if the case be not very violent, the symptoms may occasionally be removed, though certainly with less expedition, by the liberal employment of purgatives *only*, of which fact the following is an example: and to which I could, if necessary, add a long list of similar cases.

Soon after my establishment in London, a highly respectable captain in the marine service, about thirty-six years of age, consulted me for a well-marked, though not very urgent case of weakness of sight, that had distressed him, more or less, for a great length of time, and which, with the highest probability, he imputed to his having been long stationed in a hot climate, where he suffered severely from the yellow fever. I requested him to have some leeches immediately applied to the lower eye-lids. The operator, however, after

a tedious trial, failing in his attempts to induce them to bite, my patient entreated me to devise some substitute, as he entertained an unconquerable dislike to them. In compliance with his wishes, I determined to ascertain, whether purgatives *alone* would not answer the purpose of relieving the turgescency of the deep-seated blood vessels. With this view I prescribed a full dose of hydrarg: submur: to be taken at bed-time, with an active cathartic of jalap and cream of tartar the next morning, to be repeated twice or three times a week. He was also enjoined to foment his eyes with water, at about 90° of Fahrenheit, every night and morning, and immediately afterwards apply to them some of the tinctura opii mitis; several times a day to wash them with a saturnine lotion made warm, to limit himself to a spare vege-

table diet, and expose his eyes as little as possible to the glare of a strong light. At the expiration of eight days he called upon me again, assuring me that he had strictly adhered to my directions, and that he found himself well compensated for his attention to them, the irritability of his eyes having very sensibly subsided. He was directed to persevere in the same plan a week or ten days longer, when his eyes being capable of enduring a strong light, without any particular uneasiness, the cure was finally established by the use of some light bitters, combined with gentle aperients, and a tonic collyrium.

Numerous are the instances in which, from a false epithet having been affixed to a disease, a wrong, sometimes even a pernicious practice has been adopted. Thus the term weakness of sight, con-

veys an idea, that it is the result of topical relaxation and debility. Hence the natural inference (not considering that a *sensation* of weakness may arise even from plethora) that the remedies, known to possess the property of giving increased tone and energy, must be the best calculated to relieve it. And, from a mistaken notion, (happily now on the decline) that *warm* water debilitates, and *cold* strengthens, the former has been rejected, and the latter generally recommended as the best application for weakness of sight. Experience, however, proves that, though the eye may occasionally feel a *temporary* sensible relief from the use of cold water which, by constringing the vessels, and inducing torpor, lessens the acuteness of pain for a while, yet, when heated to a temperature as high as can be conveni-

ently borne, and applied in that state for ten minutes, or a little longer, night and morning, the patient experiences from it, in that form, a much more permanently grateful and soothing sensation, and a far greater alleviation of the extreme sensibility of the organ. In several instances, I have caused poppy heads, chamomile flowers, rosemary, eyebright, &c. to be infused in it, and applied as a warm fomentation to the eye; but I am not qualified, by comparative experience, to decide, whether the addition of any of the above articles has really augmented its efficacy. At the same time, as there is no reason to suspect that the warm water is thereby rendered less beneficial, they may be added, or withheld, according to the judgment of the practitioner. *Digitalis**

* In a conversation I have just had with Dr. Haworth,

is not to be considered with the same indifference. I have found a warm infusion of that narcotic vegetable materially diminish the exquisite sensibility of the eye; nor does its application produce any uneasiness, like the different preparations of opium.

Although I have spoken in high terms in commendation of the good effects derivable from a hot fomentation, consisting

he assures me, and permits me thus publicly to state, that he first used this remedy upon himself, with the greatest success, at the commencement of a violent inflammation of his eye, attended with great pain and irritability of the organ; symptoms which rendered the *vinum opii* inadmissible; and that he has since directed it for others with equal advantage. A patient of mine, who at that time laboured under a tremendous attack of the Egyptian ophthalmia, experienced from it the most striking alleviation of his sufferings. I am informed likewise, that it has been extensively and effectually employed in a strong infusion, by an eminent veterinary surgeon, in violent inflammation in the eyes of horses.

either of simple water, or medicated with different kinds of herbs, yet I have found, from a good deal of experience, that its efficacy is greatly increased by the following tincture. As the infusion of digitalis is itself a powerful sedative, whenever an infusion of that plant is substituted for the hot water, the opiate may be omitted.

Tinctura opii mitis.

R Opii purificati

Croci anglican aa ʒij

Spirit gallic albi ʒj

Aquæ distillatæ ʒvij macera in vase clauso,
per sex dies, deinde tincturam per chartam
filtra.

The object in using the above tincture is to abate, by its sedative qualities, the excessive irritability of the eye. From a variety of experiments I have found, that saffron applied to that organ (in the form

of a warm infusion) when in pain, tends most powerfully to allay its morbid sensibility ; and I need not add, that opium is well known to do the same, when judiciously used. These remedies are not the less valued by me for being old. Opium and saffron were in constant use by the ancients as applications for the eye. In *all* the various formulæ for collyria described by Celsus, we find that the papaveris lachrymæ constitute an essential ingredient ; and to several of them likewise saffron is added. After trying these articles separately, and combined, and in different proportions, no preparation appeared so completely to answer my purpose as the above, the application of which to the eye, excites very little pain, and only for two or three minutes, whilst the most comfortable sensation and

freedom in the motions of the organ, invariably follow its use. I find too, that the tincture prepared as above directed with *white French brandy*, instead of rectified spirit, occasions far less irritation. Sometimes a copious effusion of tears follows its application, together with a somewhat increased redness of the conjunctiva. But at other times the epiphora is very inconsiderable; in which event, however, I am not aware that its effects are less salutary.

The tinctura thebaica of the Pharmacopœia Londinensis, for 1745, I have repeatedly ascertained to be much too stimulating for the eye in this disease, on account of the aromatics, and large proportion of opium added to the wine. And the tinctura opii of the new Pharmacopœia is also injurious, in consequence of

the additional quantity of alcohol it contains.

The eye, in the complaint under consideration, being unusually alive to the most inconsiderable stimulus, much management is required in using the tincture. On this subject I shall therefore beg to subjoin a few instructions.

The patient being placed in a supine posture, with the chin somewhat elevated, and the eye-lids gently closed, a little of the tincture should be poured into the corner of the eye next the nose, called the inner or great canthus, from whence it should be suffered gradually to insinuate itself between the palpebræ, by inclining the head to one side, and, at the same time, twinkling the eye-lids; avoiding, most carefully, every rude effort forcibly to separate them. Or, it may be applied

by means of a small camel's hair pencil, in the following manner.

The operator, with the two fore-fingers of one hand, must cautiously depress the lower eye-lid, by which it will become somewhat everted, when the hair pencil, fully charged with the tincture, and held in the other hand, is to be rapidly and dexterously swept across its inside, permitting the eye-lid instantly to resume its proper situation. The reason for directing the remedy to be thus applied to the eye-lid, is with a view to avoid irritating the cornea. By either of the above methods, the tincture will become accurately diffused over the whole anterior surface of the globe of the eye. I am not aware, that more pain, or irritation is produced, whether many, or only a few drops of the tincture are admitted to

the organ, provided it comes in contact, as it certainly ought, with the whole of the cornea.

It may perhaps be thought by some, not very conversant with this branch of practice, that I have been unnecessarily minute in presenting my readers with the above directions. However, I have deemed them by no means superfluous, from having had frequent occasions to remark, that in applying remedies of the above description to the very delicate organ of vision, persons ignorant of the proper mode of procedure, not uncommonly *pull open* the eye-lids, and drop the tincture upon the *centre* of the cornea; by which means the pain is not a little increased, and the irritation that follows, in no inconsiderable degree counteracts the good effects which

would otherwise result from the application.

When the disease has become very inveterate, it sometimes happens, that the remedies already recommended have proved, *alone*, insufficient to effect a complete cure. In these unusually obstinate cases, a permanent blister applied upon the head, under the ears, or between the shoulders, has been found eminently serviceable, after evacuations have been duly procured, the constant irritation and discharge produced thereby, exciting a salutary derivation from the eye. A very learned friend of mine brought on this complaint, to a most alarming degree, by intense literary lucubrations. After suffering inconceivably for a long period, and fruitlessly trying a variety of tonic and other remedies, prescribed by the most distinguished of the faculty,

he speedily obtained great relief, and eventually a perfect restoration, by adopting the plan above recommended; but not without the occasional use of purgatives, a low diet, confining himself to a perfectly dark room, forbearing his studies, and suffering a large blister to be kept open on his back for many months.

CHAP. VI.

GENERAL REMARKS ON COLLYRIA, OR
EYE-WATERS.

ON this topic, my own experience, to a certain extent, confirms the following judicious declaration of Hoffman:* “Ausim dicere, plures visu privari, ex imperitiâ applicandi *topica*, quam ex ipsâ morbi vi, ac magnitudine.”

To a person conversant with ocular complaints, it is really a matter of astonishment to witness the gross mistakes that are

* Dissertatio de error. vulg. circa usum topicor: in praxi, Sec. 7.

perpetually made in the selection, and proper management of external applications for the eye. For nothing is more common than to see *astringent* lotions prescribed in the very *early* stages of ophthalmia, by the use of which the inflammation and pain become speedily and excessively exasperated. Whereas, if they had been withheld till the secondary symptoms had commenced, their utility would then have been as strikingly displayed as, in the former instance, was the mischief they occasioned. Indeed, it has been doubtless owing to the *casual* employment of that class of remedies, during the *chronic* state of inflammation, that many boasted nostrums of this description are indebted for their reputation, in the cure of morbid affections of the eye. I should not, probably, be incorrect in asserting, that more

injury has resulted from injudicious officiousness in this particular, than from all other measures which have been adopted for the cure of complaints of the visual organ. Innocent as a *common poultice* is generally esteemed, I have, in several instances of ophthalmia, seen it applied with the lamentable effect of producing, in some instances, abscesses between the lamellæ of the cornea, which not unfrequently end in incurable blindness by the opacity that follows its use; in other cases it has occasioned a speedy ulceration, and consequent rupture of the cornea, and staphyloma. In fact, a *good remedy untimely* applied to the eye, has often rendered its diseases, which were, at the time, scarcely uneasy, absolutely incurable. And I am persuaded, that less mischief would in general arise, were every

kind of application for the eye withheld, than that such means should be employed.

Amongst the different formulæ prescribed for the disease under consideration, the zinci sulphas has almost invariably been the efficient ingredient, on the supposition, doubtless, that *astringents alone* were required with a view to brace the *fancied relaxation* of the organ.

From very ample experience of the effects of that plan I dare maintain, that till the fulness of the vessels is diminished by proper evacuations, it uniformly does harm. Indeed, I have really my doubts, whether eye-waters are at all beneficial, during the existence of the exquisite susceptibility to light. If any be adviseable, I would recommend such only as are calculated to allay action, and appease pain, viz. the different preparations of lead; of which, probably, the

best is composed of the plumbi superacet: gr. j. dissolved in 1oz. elder flower water, and rendered perfectly limpid by the addition of a few drops of distilled vinegar: or a lotion consisting of gr. v. extr. conii to j. oz. of any convenient vehicle. Whichever is used, should be made a little warm, by immersing a cup, containing some of it, in a bason of boiling water. For I must repeat that *cold* applications manifestly do harm in the *early* stage of this complaint; probably by constringing the exhalent pores of the cornea, and by propelling the blood from the superficial to the deep-seated vessels of the eye, already in a preternaturally turgid condition.—And if any good effects are expected to be derived from the lotion, it must be repeated frequently during the day.

I trust I shall be pardoned for the digression, if I cursorily make a few practical remarks on the composition of eye-waters; —I allude, principally, to the custom of making them with the oxyds of metals, or other rough and insoluble powders, or with liquids which, though pellucid individually, when mixed together, undergo an immediate decomposition, and in consequence, the eye-water is rendered more or less turbid, and perhaps inert. Nothing is more common than to see the plumbi superacet; directed to be dissolved in *common* water, by which the lotion is rendered instantly opaque, and the greater part of the lead is soon precipitated in form of a whitish insoluble oxyd. Must not the rough ingredients above alluded to, stimulate the exquisitely irritable cornea, in some degree like so many particles of sand? Some-

times the tinctura, or the vinum opii, is added to an aqueous vehicle, the resinous particles of which, separating from the watery menstruum, are introduced into the eye, and adhering to some part of the globe, excite in it no small degree of irritation. However refined this may appear to the inaccurate observer, I must declare that I have witnessed very acute pain brought on by this apparently trivial cause, which pain has not ceased, until these little filaments have been removed.

I have met with similar effects from neglecting to pass an infusion of digitalis, prepared with fine powder of the plant, through linen cloth, before using it.

In a word, we ought to consider it as an invariable maxim, that eye-waters should be freed from irritating particles, either by the addition of an appropriate solvent, if the ac-

tive ingredient be derived from the mineral kingdom, taking care that it coincides with the intention of the remedy; or else by filtration through paper.

Although I am not strongly prepossessed in favour of any kind of collyria in weakness of sight, *before* the exquisite sensibility of the retina is relieved by the plan of depletion above recommended, yet *after* this object is attained, the vessels of the eye will require astringents to impart increased tone and energy. Otherwise, a relapse would be very apt to occur, from the blood again accumulating in vessels relaxed by long continued over-distention.

A great variety of formulæ might be adduced, but of the applications best calculated to accomplish that purpose, I may name a weakish solution of zinci sulphat, in rose water, with the addition

of a small proportion of camphorated mixture, and filtered. But I think a still more effectual collyrium may be formed of one drop of the sulphuric acid, and an ounce of distilled water, to which should be added a few grains of zinci sulphas, and a small quantity of brandy. Nor is a solution of the argenti nitras, in the proportion of from half to a whole grain in one ounce of distilled water, and half, or a whole drop of the nitric acid, a contemptible tonic collyrium in this case. Even cold spring water applied to the eyes, and forehead, night and morning, is by no means destitute of efficacy in this stage of the complaint.

The above-mentioned eye waters, being intended to act as corroborants, should be applied *cold*, three or four times a day.

CHAP. VII.

FURTHER REMARKS ON THE MODE OF
TREATMENT, AFTER THE MORE
URGENT SYMPTOMS HAVE
BEEN SUBDUED.

AFTER what has been stated in the preceding pages, relative to the nature and mode of curing weakness of sight, it is scarcely necessary to add, that till the intolerance of light is subdued, a vegetable diet should be strictly enjoined, more or less slender, according to the urgency of the symptoms, and the strength of the individual; as well as a total abstinence from all kinds of stimulant, and fermented liquids.

But as soon as it is deemed prudent to

employ *tonic* applications for the eye, the regimen must then be altered for one of a more generous description. At the same time, the internal exhibition of cinchona, or other restorative medicines, (the bowels being still preserved moderately open by rhubarb, or some other aperient,) will be found highly conducive to complete the cure. To these may be added gentle exercise, and the cold bath, or sea bathing.

When the eye has been found unusually dry, accompanied with a slight degree of heaviness about the orbits, a snuff of powdered foxglove, or one composed of equal parts of the pulvis asari compos. and pulv. fol. digitalis purp. has afforded considerable relief, the discharge which this preparation solicits from the sneiderian membrane tending most powerfully to unload the contiguous vessels of the eye.

In the lists of errhines, I do not recollect to have seen the foxglove included ; a herb which, I believe, is scarcely known to possess the peculiar property of that class of remedies. From experience, however, I find that, when used in its active state, it excites a very copious excretion of thin mucus from the membrane lining the nostrils, without producing any narcotic effects. This fact was first communicated to me by an eminent physician in the country, who became accidentally acquainted with it, by observing an old woman using it as a *substitute* for *common snuff*.

Applications of various kinds may be used to the eye itself. Of these, the most effectual is the vapour of strong spirit ammon. comp. or alcohol, made to come in contact with the cornea, either by pouring

a tea-spoon full of it upon hot water in a deep vessel with a narrow top, and holding the head over it, that the exhaled vapour may ascend to the eye; or else, by placing very near to the eye, a wide mouthed bottle containing some ounces of it, and immersed in a basin of hot water.—

The volatile effluvia, thus made to issue from either of the above articles, coming in immediate contact with the eye, speedily excites a pungent pricking sensation, which is soon followed by a copious effusion of tears, and great relief of the organ.

In a few very obstinate cases, I have thought that a pill, composed of half, or a whole grain of hydrarg: submur: with about five grains of the powder of conium maculat: given for some time every night at bedtime (occasionally interposing a purgative

to prevent the mouth from being affected), has been decidedly beneficial; probably by removing some slight obstructions, or more properly by promoting the absorption of some adventitious matter that may have been deposited during the long continuance of the complaint.

I cannot conclude this part of my work without urging, in the strongest terms, the absolute necessity of avoiding, for a time at least, its *exciting* causes; whether these may have been, intense application to reading, writing, or fine needle work, the exposure of the eyes to the bright rays of the sun, the artificial light arising from brilliant lamps, the luminous reflection of snow, and whatever else may stimulate an organ just recovered from the effects of over excitement. Not only *vivid* light, from whatever

source, should be studiously guarded against, as a cause equally capable of producing, and exasperating the malady ; but in very violent cases, an almost *total seclusion* from *strong light*, becomes indispensibly necessary ; otherwise our best directed efforts may prove abortive.

When the complaint, however, is *recent*, the result only of a *sudden change* from a *moderate* to a *strong light*, and the *predisposition* to it is neither *hereditary*, nor acquired by *previous disease* of the organ ; its perfect resolution may often be accomplished by the simple removal of the *exciting cause*. On this occasion I cannot help offering the Reader two cases I have met with in a little tract entitled, “ On the Fabric of the Eye,” published in 1758.

“ A lady from the country, coming

to reside in St. James's Square, was afflicted with a pain in her eye, and a decay of sight. She could not look upon the stones, when the sun shone upon them, without great pain. This, which she thought was one of the symptoms of her disorder, was the *real cause* of it. Her eyes, which had been accustomed to the verdure of the country, and the green of the pasture grounds before her house, could not bear the violent and unnatural glare of light reflected from the stones. She was advised to place a number of small orange trees in the windows, so that their tops might hide the pavement, and be in a line with the grass. She recovered by this simple change in the light, without the assistance of any medicine, though the eyes were before on the verge of little less than blindness."

Had the *cause* of the weakness of sight in the above instance escaped detection, and had the lady incautiously exposed herself to it for a great length of time, it is very probable that such a determination of blood would have taken place upon the eyes, that the cure could only have been accomplished by adopting the rigorous measures described in the former part of this work. In this instance, however, effectual relief was fortunately obtained, by simply obviating the glare of light which originally induced the disease.

The following case is also equally illustrative of a similar highly interesting practical fact.

“ A gentleman of the law had his lodgings in Pall-Mall, on the north-side; his windows were exposed to the full noon

sun, while the back-room having no opening, but into a small close yard, surrounded with high walls, was very dark. He wrote in the back-room, and used to come from that into the front, to breakfast, &c. His *sight* grew *weak*, and he had a *constant pain* in the *balls* of his eyes; he tried visual glasses, and spoke with oculists, equally in vain. Being soon convinced that the suddenly coming out of his study into the full blaze of sun-shine, and that very often in the day, had been the *real cause* of the disorder; he took new lodgings, *by which*, and *forbearing to write by candle light*, he was very soon cured."

I have selected these cases, not only as very pointed in themselves, but inasmuch as they do not rest on my own authority, nor the authority of one who had the same

object in view with myself. For the same reason I shall add another observation, with which most of my readers are perhaps familiar, though from an unaccountable inattention to such facts, they may never have applied it to themselves. In this large town, it was at one time a general remark that blindness was the fate of horses, on account of the darkness of the stables, which rendered the eyes of the inhabitants incapable of bearing the full rays of the sun. The value we set on this noble and expensive animal has induced us to furnish him with better accommodations in the new parts of the town, and the advantages are already admitted. How strange that we should be less attentive to ourselves, or our own species!

By such unheeded, and oftentimes unsuspected causes, individuals occasionally

induce the most miserable weakness of sight, nay, in some instances, absolute blindness. As prevention however is generally more easy than cure, they who experience the smallest defect of sight, should be particularly attentive to avoid every circumstance which, however apparently trivial, can injure the organ. To the preservation of sight, nothing conduces more than the admission of only a moderate light to the eyes, when engaged in reading, writing, needle-work, or any other fine dazzling employment, in quantity proportioned to the sensations of the organ, and exigencies of the occasion; and particular care should be taken to avoid all sudden and frequent changes from comparative darkness to the full glare of light.

Even *too little light* is far less inju-

rious to the eye than *too much*; for the former does harm, only when the organ is unnaturally strained to see objects to which the degree of light, is confessedly insufficient; but an *excess* of light never fails permanently to injure, more or less, or totally to destroy sight. By inattention to the above particulars, and by the frivolous economy of a quarter of an hour of the evening, many persons have prematurely sacrificed the comfortable use of their eyes; whereas, by proper care, they might have been able to enjoy for many years, unimpaired, the pleasures and comforts that arise from distinct vision.

In the event, however, of the patient being so circumstanced, that he finds himself under the necessity of employing his eyes with little intermission, he should endeavour to select *day light*, and

a *gloomy apartment*, for the purpose. And he would at the same time, find it highly advantageous, during those exertions, to indulge himself with a pair of glasses, called *preservers*. Upon these occasions, *green* have been, by oculists, as well as opticians, almost invariably recommended. It is, indeed, universally admitted, that a *green colour* is highly grateful to the eye. For who has not experienced the sensation of greater ease and pleasure, from viewing the *green fields* during the vernal months, than from beholding the earth covered with shining sand, or dazzling snow, and illumined by the refulgent beams of the noontide sun? And is it not for this principal reason, that indulgent nature has so bountifully distributed this cheerful colour throughout the vegetable kingdom?

I must, however, beg to remark, that there is a very essential difference between *looking at*, and *through green*. A greater exertion of the organ of vision is unquestionably required in using *green* than *white* glasses, on account of their opacity. The objects too, seen through them, appear of a dingy yellowish hue (a defect which I admit, is greatly corrected by habit and experience), and when taken off, the impression of light must be proportionally stronger, and consequently more injurious to the sight. By using *green* spectacles, especially those of a *deep tint*, the eye is subjected to frequent, and not inconsiderable variations in respect to the degree of light, which we have so often remarked to be detrimental to the organ of vision. They can be considered as serving the purpose only

of a shade, calculated to protect the eye from the too vivid rays of light, which may be better accomplished by other means. They should, therefore, be reserved for urgent occasions, and only as a relief to the eye when it feels uneasy from excessive irritation, or unusual exertions. At other times I should prefer *plain white* spectacles. For as the cornea becomes with advancing years *less convex*, the *glasses* must be rendered *more so*, till at length, such a degree of convexity is required, in order that they may converge the rays of light to a focus upon the retina, that the *green* glasses afford *least* aid, on account of their increased thickness, when their assistance is *most* wanted. Besides which, the eye by constantly and habitually using them, is incapable of seeing, with ease, in spec-

tacles of unstained glass. The object in the choice of glasses should be to fix on such as do not give the eye the *slightest pain, or aching sensation*, either whilst worn, or immediately afterwards. This injunction implies, that they must not possess (except in particular cases) the smallest magnifying power, the retina, in this disease, being incapable of enduring, with impunity, the additional stimulus produced by a powerful concentration of the rays of light.*

It is with much pleasure that I can recommend an improvement in the construction of spectacles, by which they are admirably and conveniently adapted to fulfil these intentions. Opticians have

* On this subject I would recommend the reader to peruse an ingenious "Essay on Vision," compiled by the late Mr. George Adams, optician.

lately contrived to fix *both white and green preservers in the same frame*, in so ingenious a manner, that either the one, or the other glass may be used, without in the smallest degree incommoding the wearer, accordingly as the eye may feel fatigued, or inconvenienced by exposure to a greater, or less glare of light, or by excessive exertions.

I cannot omit, on the present occasion, and in this place, to mention, in terms of approbation, an expedient which, I am assured by an eminent physician in the country, has been had recourse to, with no small *temporary* advantage, by a clergyman who, for some years previously to its adoption, had been in a great measure incapacitated, on account of extreme irritability of sight, from pursuing his necessary studies

and avocations by *candle-light*. The clerical gentleman alluded to, procured from a glass manufactory, a flat-sided thin bottle, of considerable size, with a stand of a convenient height, which he caused to be filled with the same kind of *green*, or *blue* liquid which chemists are in the habit of introducing into bottles of a similar description, for the purpose of exhibition in their shop windows. The bottle, thus prepared, being placed on his table, betwixt the object he had to look at, and the light, the luminous rays which issued from his lamp, or candle being, by this arrangement, transmitted through the green, or blue medium in their passage to his book, or writing paper, became so agreeably modified, that he found himself, with this assistance, enabled to read, or write, with comparative ease and facility.

The contents of the preceding pages, the result of considerable experience and reflection, were submitted, with the greatest deference, to professional consideration; and it is with much satisfaction I find that, during the intervening period between the former edition, and the work in its present form, the doctrine has been generally admitted, and the practice founded upon it as generally adopted.

If I should be thought tedious, my apology rests on the absolute necessity of discountenancing by arguments deduced from analogy, as well as positive experience, the prevailing and indiscriminate use of expedients inadequate to the cure of a very formidable complaint. Affections of the Eye demand, at all times, the most serious attention and the fullest investigation, and are too impor-

tant in their consequences to admit of being trifled with. Errors in the treatment of many other diseases may be repaired by subsequent care, and more appropriate applications; but a small mistake in regard to disorders of the eye, is often irreparably injurious to its function.

The practical observations interspersed throughout this work may serve, at least, as the means of greater improvements in a branch of medical science hitherto but little cultivated by *regular* practitioners, from whose comprehensive views of pathology, important improvements are *alone* to be expected. At the same time, these observations will apprise the general reader of the great hazard that may be incurred by committing the care of ocular diseases to the officious zeal of ignorant,

though well meaning private persons, or to the more dangerous treatment of empirics, unacquainted not only with the structure, œconomy, and morbid derangements of that delicate organ, but even with the qualities of those remedies which they fearlessly employ.

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