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OBSERVATIONS
ON
HEMERALOPIA;
OR,
NOCTURNAL BLINDNESS.

WITH
CASES,
AND
Practical Illustrations.

BY ANDREW SIMPSON, SURGEON.

"Nam oculi, tanquam speculatores, altissimum locum obtinent: ex quo plurima conspicientes fungantur suo munere." CIC.

"There are many disorders of the eye that cause total blindness; others that impair the powers of vision without destroying it altogether." REID.

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BY THE AUTHOR

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BY THE AUTHOR

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FOR THE USE OF

1811

Advertisement.

THE Author has it in contemplation, some time hereafter, to publish a Work on the Preservation of the Health of Mariners, Travellers, and Residents in the warmer climates; or of those who may be inevitably obnoxious to irregular exposure, in variableness of circumstances. The principal constituents of the Work were incorporated at least ten years ago: but at the termination of the last warfare, the composition was thrown aside, and the following notification was made at the time:

“The accidental closure of the Temple of Janus, may lead to the supposition of inutility in the subsequent observations.—A peaceable disposition is an admirable property in possession; and may it last undisturbed. As, however, maritime undertakings will continue in all commercial nations, and the probability of warlike irruptions, the suggestions may not be altogether unavailing.”

The Work, if published, will have a principal reference to the *Prevention of Disease*. All the most remarkable circumstances, which may influence this grand object, will be taken into consideration.

“Hoc opus, hoc studium parvi properemus et ampli,
Si patriæ volumus, si nobis vivere cari.”

Introduction

The first part of the book is devoted to a general introduction to the subject of the history of the English language. It is divided into three parts: the first part deals with the history of the English language from its origin to the present day; the second part deals with the history of the English language from the present day to the future; and the third part deals with the history of the English language from the future to the present day.

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P R E F A C E.

AS in the construction of an extensive building multifarious particulars ordinarily contribute to its completion, so, likewise, in the formation of medical science, the assistances of individuals may be considered requisite. This individual contribution has availed much in rendering the healing art so beneficial, as is demonstrated by hodiernal experience. Without this collective assistance, it must have remained exceedingly incomplete and unsatisfactory. The complaint which is the subject of the following observations, is occasionally of considerable importance, even although it may frequently be considered symptomatic. As far as the Author's experience has extended, this is more especially of importance in the warmer climates.

It is not intended to exhaust the subject, but to lead the attention of those who may accidentally meet with the complaint, to such points as are deserving of the principal attention. The most remarkable considerations are drawn from immediate observation.

GLASGOW, March, 1819.

Section First.

PRELIMINARY OBSERVATIONS.

THE eye, a peculiar and rather unusual affection of which is the subject of the following remarks, is an organ eminently precious. The enumeration of the modes in which it may relatively or absolutely be serviceable, in the ordinary assistance and guidance, and likewise the enjoyment and happiness of mankind, would indubitably be deemed superfluous and unnecessary.

This contexture is also of unequalled workmanship, and is the most admirable and beneficial contrivance in the human constitution. Its unaffected or unimpaired soundness, therefore, is always, with the possessor, a consideration of particular importance. When the delicateness, and the particularity of its conformation are in-

vestigated, the contemplation of its inconceivable usefulness, and the knowledge of its frequently inexplicable, but opportune escapes from misfortunes, are proportionately circumstances of gratification.

When consideration is made for the almost unceasing employment of the eye for the purposes of the possessor, as a guide in his numberless movements, observations and examinations; in fact, as being a principal and inimitable instrument of one notable mode of sensation, as subsequently regulated and determined, by intellectual energy, the advantages become still more inestimable.

The visual faculty, and especially after it is qualified by experience, is therefore one of the choicest, and in general, most infallible assistants to man, in his connexion with surrounding substances. In the progress of life, however, it is well known, that there is a complex result, from the mutually assisting exercise of all the senses, so that the precise dominion and operation of each come to be disregarded. In order, next to the power of vision, which, generally speaking, is the most noble and useful of all the senses, the power of feeling, or sensation, or what is usually called *touch*, will naturally hold its place in a scientific and legitimately progressive arrangement.

The acuteness, or absolute strength of vision, is

frequently different in particular individuals; and it is a sense, likewise, which is liable to gradually introduced modification, agreeable to its employment, in different occupations and professions. This is sometimes particularly and expressively illustrated in the illiterate, whose habits of attention are very restrained or confined, and who commonly use their eyes for the grossest and most unrefined observation,—and the philosophic mechanic, who, from the peculiarity of his employment, uses his eyes for ascertaining the properties, and frequently the adjustment of delicate structures, and the conjunction of the *minima visibilia*.

This invaluable instrument, the eye, therefore, by prolonged habituation to particular ways or forms of adaptation, seemingly becomes familiarized to the instantaneous act of perceiving and discerning, so that ultimately, the performance seems to be intuitively accomplished. And, moreover, it is the intermedium to intellectual comprehension (but which, from custom grown into habit, becomes imperceptible) and conclusive determination, which to those unacquainted is wholly incomprehensible.

The eye, besides being contributive to the purposes of ordinary guidance and intellectual improvement, is also an instrument particularly serviceable in apprehending and distinguishing the appropriate and characteristic appearances of

earthly, or indeed of all visible objects, and likewise peculiarly expressive in the knowledge of physiognomy. The eye, therefore, is the most expressive feature in the human visage. The observation of its varying appearance, both in common health and disease, should not be neglected by the practitioner. It is capable of changing this expression conformable to the diversified states of mental emotion. After this manner, hope, love, joy, grief, anger, despair, revenge, deceit, cunning, design, and many others susceptible of intelligible delineation upon corporeal lineaments, receive more or less of characteristic representation. The keen eye of discernment is hereby enabled to anticipate the intentions of others, and adopt precautionary preparations proportionate to the combination of circumstances. By the expression of the eye, the man of knowledge or the philosopher is often easily distinguished from the clown, uneducated, and unassisted by intellectual illumination. This beautiful piece of structure too, (overlooking the manifold distempers and deformities to which it is obnoxious,) is also frequently most peculiarly indicative of constitutional healthiness, or unsoundness.

An anatomical description of the eye constitutes no immediate part of this dissertation, because the particular examination of it would

lead into a length of disquisition here inadmissible, and notwithstanding, seem unsatisfactory; and as the general doctrine of the visual faculty, the structure of this organ, and the principal diseases thereof, have already been considered in different publications. And it is supposed that all who undertake the treatment of its diseases, &c., are well acquainted with its structure and functions. Without this requisite, their assistance must frequently be unavailing, or what is still more unfortunate, their applications will commonly induce mischievous consequences.

This beautiful, but delicate instrument of vision, is liable to accidents immediately applied to itself; or, as frequently happens, it may be influenced in a very important and often inexplicable manner, by the occurrence of many systematic complaints; and these occasionally, or rather oftentimes, not manifesting themselves by any extrinsical characters, or intelligible phenomena.

The remarkable usefulness of the eye, its necessity in the guidance of man, even in the common affairs of life, must have always engaged his most particular attention, both for its preservation from accidents, and also the obtainment of relief from the consequences of these, when contingently experienced. A beautiful and expressive comparison is made betwixt the protection of

this organ, styled the apple of the eye, which may allude more pointedly to the pupilla, and that watchful and faithful superintendance, which a benevolent guardian is supposed continually to have over those entrusted to his governance.

The colour of the eye varies in different nations, or even in those of the same region. This colouring is chiefly or wholly confined to the posterior surface of the processus ciliares, as they are called, and this passes through an endless variety of shades, from black of the greatest intensity, to that of the cerulean. For what reason the natives of the warmer climates should have the dark eye, does not seem conveniently explorable, or why the inhabitants of the northern countries should be commonly marked or distinguished by its blueness. But this, however, appears to be an almost invariable regulation in the continual progress of nature's formation. The blue eye in the tropical climates, would be deemed an occurrence of extraordinary infrequency, and the few individuals of this description are ill calculated to bear the brisk glare of light; but this peculiarity in any of the natives of these regions may be considered preternatural, and therefore accompanied with disagreeable inconveniencies.

The imperfection of the visual faculty, or absolute blindness, of all the privations of the senses,

is perhaps the most discouraging and unpleasant. This imperfection of the power of vision may exist in every possible gradation, from the slightest deviation from the greatest acuteness of vision, to absolute blindness, or the impossibility of distinguishing light from darkness. A singularity, occasionally accompanying disordered vision, is, the capability of some individuals seeing best in daylight, and that of others who see most conveniently in nocturnal obscurity. The first of these approaches more especially to the description of ophthalmic complaint attempted to be characterized in this dissertation.

The nocturnal diminution or imperfection of eyesight, has been occasionally observable, both on land and at sea, but the subsequent observations are applicable only to the latter mode of occurrence. The Author has seen this complaint distinctly marked only amongst seafaring people, and that always after they have been for a considerable time exposed to the circumstances, which may be supposed to be more especially productive of such a complaint. This affection at sea is sometimes a concomitant (whether accidental or necessary is not here undertaken to demonstrate) symptom of a state of the constitution, which is seemingly, as far as personal observation has extended, not void of danger. The person labouring under the mischief in the mean time,

considering, and describing this as his principal inconvenience, or uneasiness; but upon a more particular examination, a very considerable derangement of the state of the constitution will, as far as present experience guides, be found to predominate.

Section Second.

HISTORY, DEFINITION, &c., AND CRITICAL REMARKS
ON THE DISEASE.

AT the conclusion of the preliminary observations, it was remarked, that this ophthalmic complaint appeared only after a prolonged exposure to those circumstances, which may reasonably be supposed to be principally productive of this unpleasant inconvenience. A conclusion is regularly deducible from this statement; and which, from considerable observation, and this performed in various climes, appears veritable, that a particularity of circumstances, generally, if not constantly, must precede this disease, and moreover, that their application must also have been of some continuance.

This ailment has by some been denominated Nyctalopia, but the incorrectness of this is manifested by their employment of an appella-

tion, which is grammatically and legitimately applicable to an affection of the eyes of a description diametrically opposite, in which the eyesight is most serviceable in an obscure light; it should therefore be denoted by the term Hemeralopia. How the denomination Nyctalopia should have been appropriated, by many, most inconsistently, to this complaint, appears altogether inexplicable. The Hemeralopia, or, positively, day-sight, and negatively, nocturnal blindness, has been nominally mentioned, as an occasional disease, or symptom of disease, but of the disorder itself, no intelligible or satisfactory information has been supplied. This affection of the eyes probably never subsists, as an entirely topical, and original, and simple disorder, but may generally or rather invariably be considered, as symptomatic of some derangement of the healthy condition of the constitution.

The assignment of a nosological character and locality to this affection, may in some measure facilitate and regulate the fulfilment of the following discussions, which relate especially to this complaint; and which are principally derived from immediate observation.—The late Professor Cullen seems to have ranked it under his fourth Class, and first order, *Dysæsthesiæ*, defined in these words: “*Sensus depravati aut deleti ex organorum externorum vitio.*” From this station given to the disorder, it would appear, that the

respected author had considered this as an affection topically confined, and not so immediately depending on constitutional indisposition: and in his classification it is more immediately comprehended under the genus *Dysopia*, rather than the antecedent one *Amaurosis*; yet there seems to be a relationship betwixt the two distempers, which in the present condition of medical science, is not conveniently determinable.

Vogel supplies a very concise definition of this affection—"Visus noctu abolitus." Different appellations have been applied to dimness of eyesight, such as *Amblyopia*, *Amblyogmos*, *Amblyosmos*, *Amblyopsis*, even these were appropriated by Hippocrates, and made to express *visus hebetudo*, or dulness of vision, arising from causes of various kinds. He seems indeed to have applied these terms to dimness of sight, from what cause soever it may have originated.

Celsus likewise explains with his usual conciseness and terseness, different affections of the eyes, but whether he possessed any knowledge of this distemper, does not from his own declaration appear sufficiently established. In the thirty-eight paragraph of the sixth chapter of the sixth book, his compendious description seems to have some reference to this ophthalmic affection,—*"Præter hæc imbecillitas oculorum est, ex qua quidem interdium satis, noctu nihil cernunt;"* and

he adds, "quod in feminam bene respondentibus menstruis non cadit." This is a very concise notation of this affection, and in his statement, the philologist will perceive the strongest evidence of the physician's knowledge of his vernacular language. If Celsus had employed the word *vident*, instead of "*cernunt*," this would necessarily have included or expressed a complete abolition of the power of vision in the night, but the term he has used, would literally suggest that those affected with this ocular ailment, could not distinguish surrounding objects in the nighttime—If Celsus had employed the generic term, *videre*, the nature of his description would have been materially different. *Videre*, (in the infinitive, as thus implying the verbal essence,) as a generic term, signifies, to perceive the existence of any object by the eye, when the organ is in a sound state, and the object is neither hidden, nor too far from it. "*Cernere*" (the word used by the Roman physician) differs from the former in denoting the most perfect exercise of the sense of sight, so as to discriminate the object seen from every thing with which it might be confounded. When thus applied to those labouring under the "*oculorum imbecillitas*," it must convey the notion that although the distinct vision implied in "*cernere*" be lost (in the nocturnal obscurity for example), that common,

or ordinary share of vision, involved in *videre*, may occasionally continue to operate.

The complicated and cacophonous appellations used by Hippocrates, denote no more than dimness of eyesight, from *αμελυσ* and *ωψ*, "*visûs hebetudo*," "*acies visûs retusa*," &c. No serviceable information is therefore obtainable from these terms employed by the Greek physician.

This affection, as formerly insinuated, constitutes the *Nyctalopia* of some authors, both ancient and modern; of the former are *Ægineta*, *Actuarius*, *Trallianus*, *Ætius*, &c., and of the latter several could be enumerated. Hippocrates seems to have a more correct notion of this appellation, when he says, "*οἱ δὲ τῆς νυκτος ὄρωντες οὓς δὴ νυκταλωπας καλέομεν* (*quos Nyctalopas nuncupamus, qui noctu videntes*)." This is the most genuine and literal translation of the phraseology. This *nocturna cæcitas* was early remarked, and must have been a subject of observation even in former times, and without relation to a sea life, to which it is now more commonly referable. This last conclusion does not deny its existence among those inhabiting land, among whom it is frequently observable in various regions of the earth; but the Author in these remarks, has reference principally to his own observations.

The Latins employed different terms to express various affections of the eyes, but the one which

seems most applicable to the complaint under consideration, is *lusciosus*, which denotes a person who sees imperfectly in the twilight of morning and evening, and whose vision is clear only in broad daylight. “*Lusciosus ad lucernam non videt.—Vesperis non videre quos lusciosos appellant,*” “*Varro—ædepol, tu quidem Cæcus, non lusciosus.*”—*Plaut. Mil. Gl. 2, 3. 51.*

The more expressive and appropriate designation *Hemeralopia*, has been used by several to characterise the ophthalmic affection under consideration. It may be observed (as already hinted), however, that this term implies only indirectly nocturnal blindness. The appellation is compounded of *ἡμέρα* “*dies,*” and *ὀψ* “*oculus,*” but the derived concrete, apparently, should be written *Hemeraïopia*. It directly denotes vision in the day, and therefore, by an implied negative, is made to signify the incapacity of seeing in the obscurity of night, or nocturnal blindness, the complaint under consideration.

Dr. Cullen objects to the word *Amblyopia*, by saying “*Verbum amblyopia, quo pro hujus generis nomine utitur Sauvagesius, alio sensu intelligunt tum veteres, tum Linnæus et Vogelius; ideoque hujus generis nomen mutare necessarium duxi.*”—*Gen. Morb. Vol. I. p. 307, Editio 1792.* This affection has been denominated *Hen-blindness*, from this circumstance, that they are said to

labour under this defect, and that they are unable to pick up small grains in the dusk of the evening, and is said to be a common affection in Russia.

The adoption and definitions, of amblyopia, by the two nosologists Sauvage and Vogel, are in these words: and first by Sauvage, "*Visûs debilitas respectiva, ad situm, gradum lucis, distantiam objecti, oculis pellucidis.*" And by Vogel, "*Visûs imbecillitas integro oculo.*" Cullen objects to these definitions, probably from their implying an apparent soundness of the organ; but in this respect his objection is not so important as he was led to suppose.

The affection under examination is the *Hemeralopia* of Greek authors, of *Plenck*, &c. The "*visus diurnus*" of *Boerhaave*: the "*Nyctalopia*" of several later writers. But here the ancients are not altogether excluded. The "*Amblyopia crepuscularis*" of *Sauvage*: the "*Dysopia tenebrarum*" of *Cullen*: the "*Shebkeret*" of the *Arabians* (the learned *Mr. Good's Nosology*): the "*Nachtblindheit*" of the *Germans* (*Idem ibidem*).—This affection of the eyes, whether considered sympathetic or idiopathic, shall for the present continue under his 94th genus, in the order *Dysæsthesiæ*, and class *Locales*, constituting the "*Dysopia*" *Culleni*, and the Generic Definition is "*Visus depravatus, ita ut non nisi certa luce, vel ad certam distantiam, vel in certa positura, objecta clarè*

videantur." Species 1. "Dysopia (tenebrarum) in qua non nisi in magna luce objecta videntur."

In the progress of this complaint, some of the phænomena comprised under the appellation Pseudoplepsis, of Cullen, may also be observable. The patient may, for instance, be affected with the Diplopia of Sauvage and Plenck, as exemplified in his seeing a candle double. But more particularly, he may be led to fancy some of the phænomena comprehended under Cullen's first species; the "Pseudoblepsis (imaginaria) in qua quæ non existunt conspici videntur." This would be the "Paropsis," *α* Phantásmatum of Mr. Good; including, 1. Dark spots. *Muscæ volitantes*. Auct. Var. The *Myodesopsia* of Plenck. The *Suffusio Myodes* of Sauvage. 2. Net-work. *Visus reticularis*. Plenck. *Suffusio reticularis*. Sauvage. 3. Sparks. *Suffusio scintillans*. Sauvage. 4. Dazzling. *Marmaryge*. Hippocr. Vogel. *Photopsia*. Plenck. 5. Irridescence *Suffusio coloris*. Sauvage, &c.

At the commencement of this complaint, the first remarkable circumstance which engages the patient's attention, is the dimness of his eyesight in the twilight, or in a place which is not sufficiently illuminated. The importance of the function renders an imperfection or diminution of its exercise, with the sufferer, an object of immediate and particular observation, although, as hinted,

there has always been observable some simultaneous indication of constitutional indisposition.—The malady has also been seen in different ages, and seemingly very different states of constitution. Notwithstanding these considerations, the nocturnal dimness of vision is the evil of which the patient almost invariably first complains. Although as far as autoptical observation has reached, something more fundamental and important has always been found in the constitution. But from this it is not dogmatically concluded, but that this affection may take place in particular circumstances, where the constitution is perhaps not so materially influenced, as to imply any immediate danger, or even evidence of important indisposition. But in the course of practice, the contrary of this cannot, in every case, with any truth, be affirmed.

The author has never seen an example of this affection except after several weeks subsistence upon sea diet, and exposure to other unfavourable circumstances. It has likewise been remarked, to occur more especially in tropical climates, or at least, in those naturally subjected to the influence of high temperature. From this, however, there is no inflexible disposition to assert, that unusually high temperature is necessary for the production (in union with other things) of this complaint. It is well known, that this ophthal-

mic distemper occasionally occurs in Britain and other northern countries, which are influenced by temperature which suffers only transient augmentation.

Some individuals, it would seem, become liable to it when exposed to particular circumstances, while others escape this peculiar and rather infrequent symptom, even although all their distinguishable, external, and constitutional circumstances, have a striking similitude to those of them affected with this unpleasant distemper.

This disagreeable inconvenienc of impaired eyesight, is not in those cases to which this tractate applies, considered, as an idiopathic affection; for, if the complainers are particularly interrogated, even antecedently to this remarkable phenomenon, they would mention some feelings of alteration in the natural condition of their healthiness.— There is a constitutional deviation from the ordinary standard of health, but in most cases not so particularly characterised, as to enable, or rather to induce, a vulgar and untaught person to make a distinct statement of the nature, or give a description of the feelings introduced by his indisposition.

That this affection is generally symptomatic, appears in some measure confirmed from the sudden manner in which it sometimes is observed to intervene, at the same time, the apparent sound-

ness of the eye, the almost constantly synchronous remarkable difference in the state of the constitution, which will be found upon a critical and discerning inquiry. From experience, the determination of the little chance of relieving the ocular ailment, without either partially or generally meliorating the state of the system. The speediness of the disappearance of Hemeralopia, in many cases, after some attention has been bestowed upon the general health, but which has continued as long as this was disregarded. The occasional removal of the complaint by the influence of remedies directed to the general system, even without any special attention to topical applications, and that in proportion to the constitutional improvement, that of vision is ordinarily attainable.

As far as the Author has observed, it is in the evening, at, or a little after sunset, that the person affected with this ailment first observes and describes his grievance. He is surprised to find, soon after the disappearance of the glorious luminary of day, that all visible objects seem to be speedily enveloped in a muddiness or mistiness, so that their outlines are not distinguished with the customary readiness, or they seem to become so confused and blended, especially smaller objects, that they cannot be discriminated: even a brilliant

or luminous body, such as a candle, is seen obscurely or feebly, as if glimmering in a fog.

As it is intended that this little work should contain chiefly what the Author has himself observed in this disease, he will narrate especially those phænomena which have come under his own observation.

When a roguish looking sailor, for example, applies to his medical officer and mentions that he is "blind," or "that he cannot see in the night-time," suspicion is naturally produced (unless there is something in the person's appearance which certainly shows the presence of complaint, for it need scarcely be mentioned, that these fellows often attempt various modes of feigning disease,) in the medical attendant, and he is desirous of more creditable and palpable evidence than the awkward and doubtful statement of the person who complains. It has been observed, that in some of these cases, the eyes retained in daylight, nearly their natural appearance, the lustre and other common outward qualities of these organs remaining almost unaltered. The pupillæ are susceptible of contraction and dilatation with little variation from their natural manner and degree, according to the quantity, &c., of the rays of light.

This affection, however, is generally combined with more or less of a peculiar dulness of the

eyes, and the pupils seem more expanded than natural, and occasionally the whole visage exhibits the semblance of silliness, or a certain degree of stupidity. And it may be observed too, that this affection is principally, or rather exclusively, troublesome from sunsetting to sunrising. 'This is so constantly the case, that this circumstance may duly be considered its pathognomonic characteristic. This symptomatic phænomenon, it has been remarked, likewise, to be different in degree at its beginning, or the time when it first displays itself; in some, the dimness of vision has not been so complete but that the person could distinguish objects of considerable magnitude, but in others again, so great has the nocturnal obscuration been, that during night, even with the assistance of candlelight, they were nearly in complete darkness. A probable conclusion, however, is, that often this affection may come on rather gradually, although its presence may not be much remarked, or, 'at least, 'complaint made, till it has obtained some perceptible advancement.

In the crepuscule, or twilight, the incapacity of distinguishing objects commences, and the patient is surprised to find himself enveloped with comparative darkness, or such a degree of confusion and nebulosity, that the distinction of objects becomes almost impracticable. Surrounding bodies are seen indistinctly or confusedly, or they

seem with artificial lumination to be variously huddled together, and this indistinctness of their appearance is applicable both to the coloration and figuration. The patient, with the obscure light of the evening, or that of a candle, beholds faces but cannot tell whose they are, and he is then often obliged to determine his friends and neighbours, either by their voice, or by the sense of feeling, which, if he is for any length of time affected with the nocturnal blindness, he seems to exercise with increased facility and promptitude. In a well-known track he hobbles along more swiftly, but in a course to which he is less accustomed, he becomes more cautious and attentive in his movements, and, probably, occasionally stumbles against intervening obstacles. In these circumstances he commonly moves on cautiously, as if determining or calculating the distance which he may have traversed, the nature of the remainder, and the management of his anticipated progression.

His gait becomes peculiar, and his mode of walking is awkward and straddling, and assumes some of the peculiarities of the blind man's movements. If he is narrowly observed, the eyes are seen to be directed forward as much as possible, but they seem to have more of a vacant stare, or indeterminate appearance, than that of acuteness and usefulness. But still further to prevent the

intrusion of offending objects, and likewise to aid in exploring his way, the superior extremities are commonly extended, both as examiners, or feelers, and defenders, and he may occasionally be observed, labouring, as if ascertaining his path, or the nature of some of the objects falling within his reach, by the sense of feeling. Although his eyesight may, even in the daytime, be weaker, or more indistinct than natural, yet it is only from sunset to sunrise that these circumstances are so remarkable. If a blazing luminary is presented, his progress is apt to be instantly interrupted, and he stares at the unexpected occurrence, (this has been repeatedly observed); and if the pupillæ are carefully noticed, they may be observed to be slower in contraction than ordinary, and, perhaps, continue more expanded, or dilated, than in their natural condition.

In some of these cases, the eyes have so much of the appearance of soundness, (unless general indications of defective health accompany,) that, when a person of doubtful veracity makes application for assistance, (the allusion is here made to such as soldiers and sailors,) the medical attendant, at first, hesitates with respect to the truth of his statement, and cannot receive his account as conclusive evidence, until he obtains additional information to strengthen his conviction of the existence of disease.

In most cases, however, which the Author has seen, upon careful examination, both of the appearance of the eyes and of the state of the constitution, something has been detected which confirmed the probability of the existence of ophthalmic complaint; and, consequently, in some measure, confirming the patient's declaration.

This affection has been said to occur, or been chiefly observed, in those with light-coloured or blue eyes; but this assertion is far from being continually applicable. It has been observed in those with dark eyes, such as the Asiatics, and Chinese; but as far as the Author's experience, in this complaint, has extended among Europeans, it has chiefly happened in those whose eyes possessed the azure or bluish colour. By way of illustration, the following story of a fortuitous observation may shortly be introduced: and more especially, as it may have an explaining reference to the state of vision; which should, perhaps, more expressly obtain the title of Nyctalopia. In this affection, the person sees better in a weak than in a brisk light, or in the shade than in a fair sunny day. This condition of vision is said to be, at least sometimes, remarkable in those whom the Spaniards and Portuguese style Albinoes. The general appearance of those affected with the peculiar whiteness of surface, presenting in those denominated albinoes, is called, by Mr. Good, Al-

phosis, (most probably brought from *αλφός*, *Hes. albus*,) forming the fifth genus, of the fourth order of his third class (Class. *Hæmatica*, Order *Dysthetica*, and Genus *Alphosis*). Definition: "Cuticle dead white; pupils rosy; corporeal powers weak. And he seems to form two species: 1. *Æthiopica*. Hair white and woolly; irids white; sight strongest in the shade: found among negroes. 2. *Europæ*. Hair flaxen and silky; irids rosy: found among Europeans and other nations."—*Nosol.* p. 247–8.

The Author of this little tract has often seen negroes spotted and speckled, on various parts of the body, the consequences of wounds, burns, ulcerations, &c.; the parts which had been injured, having assumed a dead white, like the common shade of the skin of the British. It is well known, the palms of the hands, and soles of the feet, even of the darkest negro, have a much lighter shade than the general surface of the body possesses; the dark colour of the negro seems to depend upon a black pigment, secreted in the *rete mucosum* (as it is styled), and the accidental whiteness of injured spots, or of the general surface in albinos, is apparently owing to the want of this colouring substance.

The Author has only seen one instance of an albino (or albinism), to which the story lately hinted refers. A Chinese albinism was once casually observed on the street, but the Author being at

the time without the assistance of an interpreter, all the information he could obtain was from autoptical observation. The hair was of a flaxen colour and fineness, (whereas, the native and natural colour is black of the greatest intensity, and the possessor nourishes and cherishes his hair with peculiar attention,) her eyes were light or sky-blue, the surface uncommon for its whiteness and apparent delicacy; the pupillary membrane exhibited an iridescent appearance. The rencounter happened on a day of sunshine, and this was so far fortunate, in exemplifying the influence of light on the eyes of a person possessed of such rare peculiarities. The pupils seemed to be contracted to a narrow point, and the eyes twinkled much, as if uneasily affected by the luminous impression.

If an opportunity had been obtained, of investigating the different circumstances of this very uncommon phenomenon, it might have proved to be nearly an example of what should be denominated Nyctalopia, or a case in which vision was most convenient in the shade or twilight. This, it is confessed, is only a probable conjecture, from the nature of the most remarkable circumstances.—The brisk light of day appeared to be offensive to her, the pupillæ were contracted, a great part of the eyeballs covered with the eyelids, and it was further observed, that she inclined

to keep her back towards the keenest glare of light. This is the only instance of the kind the Author ever had occasion to see, either in Africa, Asia, or China, although he has seen many myriads of the natives of these countries.

Why the eye should, in particular instances, and exposure, and without particular evidence of disease, &c., become difficultly acted on by the influence of lessened light, is not a subject susceptible of satisfactory explication. Sometimes this complaint happens, where, upon superficial observation, no other remarkable or particular symptoms of indisposition, or uneasiness, are manifested. But if a critical and knowing scrutiny is made, some deviation from the healthy standard, will, it is believed, be generally perceived. With the Author, however, it remains a question, (not hitherto answered,) whether this affection ever subsists, in any instance, as a simple, topical, ocular complaint.

It has been observed in examples where there was reason to suppose, from the attending symptoms, that there were congestion, or vascular fulness, at the anterior lobes of the brain. In F.'s case, (to be narrated afterwards,) this was not, perhaps, pointedly indicated; but, even in this instance, the vessels of the coats of the eyes were seemingly more plentiful and distended, than in their natural condition: the eyes had a suffused

bloodshot appearance, with an unnatural viscid secretion at the edges of the eyelids. His general aspect had a degree of silliness, or stupidity, and he appeared listless and inactive, and all his movements were languidly performed. There was a dunnish or duskish appearance, in the course and extent of the muscoli orbiculares oculorum, which was peculiar.

In some instances of Hemeralopia, it has been remarked, that the radiated processes of the pupillary membrane, and the musculus orbicularis pupillæ, are more observable than in the natural healthy condition. At the part of the iris where the little band of circular fibres is placed, in some affections and states of the eye, there seems to be a slight puckering, or gathering of this organ, giving it rather a rugose appearance. This portion, namely, the orbicular fasciculus of fibres encircling the pupil, seems to be the chief agent in the contraction of the pupillary aperture; and, the moment it relaxes, the processus iridos are drawn towards their insertion at the ciliary ligament, and in proportion to this change the pupil is amplified. The transverse perforated septimentum, or pupillary membrane, would, in some cases, seem not to reflect the rays of light so readily as in the healthy state of this organ; and, consequently, the eyes seem duller than ordinary. The state of the corneæ, too, in some cases, may

partly contribute to the production of the forementioned appearance. The precise change which takes place in the iris to cause this effect, is unknown. This refers especially to the processus iridos, the peculiar condition of which, in some measure, explains the dulness of appearance, or the diminution of lustre, which in some cases is so remarkable.

In many cases, too, the visage assumes a wearied and listless aspect, and the peculiar appearance, as already observed, about the eyes, is occasionally observable. This remark refers chiefly to those who have been much exposed to the light and strong sunshine, the consequences of which exposure are so often to be seen in tropical climates. The occasional unnatural expansion of the pupils, the appearance mentioned as sometimes occurring in the irides, and, also, in several examples of this affection, the lustre of the corneæ, in some bad cases, the blearedness and muddiness of the eyes, &c., will, when superadded to the antecedents, and in company with other phenomena, especially in conjunction with the intelligent practitioner's distinctive observation, be sufficient to characterise this complaint, and still more particularly, when all the circumstances hinted at in the following section are taken into consideration.

Section Third.

REMARKS ON THE CAUSES AND NATURE OF THE DISEASE.

THIS part of the subject appears to be involved in obscurity; and to assign the true or actual causes of this ocular affection, does not appear a task to be readily executed. This disease may appear in persons, who, to ordinary observation, seem to possess a common or moderate share of health, or in whom no particular symptoms of any important complaint are observable. This circumstance, in the public services especially, may lead to some inconvenience. As long as the person applying for assistance, is considered to be in possession of an ordinary portion of health, his assertions and statements are liable to be disbelieved by the practitioner. This affection is said to be almost common or peculiar to some regions. If this is true, that it does appear even on land, (of which, from the evidence adduced, there can be little doubt,) and in temperate latitudes, and in numerous instances at the same time, yet it may be concluded, that the causes of this occurrence are altogether unknown: and, also, the precise condition of the eyes, in these cases, is far from being understood. But the

Author shall not wander far into the observations of others, being inclined, more especially, to consider what he has himself seen and examined. It has been already observed, that some time passes, after exposure to those circumstances which may be supposed to be productive of this complaint, before this, as a consequence, becomes remarkable. The Author would further state, that he has witnessed the disease in a warm climate only, and that, in every instance, some time had elapsed from the beginning of the exposure, to the concurring or favouring causes, before this affection appeared.

He is not ignorant that this disease has been said to appear in countries, which, in some part of their seasons, are remarkable not for their warmth, but for their coldness. High temperature alone, it is supposed, cannot justly be considered as the productive cause. It is more probable, that there must be a combination of circumstances in generating this complaint: and these, in relation to their effects, may be considered as either more universal or particular. Many of the causes, it is likely, produce a certain alteration in the state of the constitution, but which may not be displayed by any discernible phænomena. Some of the causes may operate topically upon the eyes themselves, such as the bright light, the effluvia of some poisonous substances,

&c. &c.: but the effect of these latter causes is most probably of a mixed nature. Some of these causes, perhaps, may have the power of inducing an affection somewhat akin to the amaurosis foricarium of Sauvage.

All those in whom it has been observed, have, for some time, subsisted on such diet, and drank such water, as are commonly supplied on shipboard. And they have also for some time (generally for several weeks or months) been exposed to the influence of augmented temperature, that is, to a degree of heat, to which they have naturally not been accustomed. And further on this head it may be remarked, that in all those cases in which the Author has observed this affection, there was every reason to suppose, or in most cases to believe, evidently, that a scorbutic disposition subsisted in the constitution. How the scorbutic diathesis should induce or qualify to the induction of this affection, does not appear to be understood. In scurvy, it is well known, that general debility prevails, and that sometimes in a high degree, so that the person affected may die suddenly without the evidence of any other complaint.

The lessened power of vision in the night, or in an obscure light, may in these (as in many others) arise from what has been abruptly styled paralysis of the retina, and this may exist in different degrees. That this membranous structure,

(and which may, without entering deeply into the subject, be simply called the seat of the sense,) may be so far impaired in its functions, as not to be influenced in the usual manner by the rays of light, and especially when these are feeble, seems to be a probable supposition. And this state of the retina may be induced either by causes operating more diffusely or more confinedly upon the constitution. But although general debility is evident in scurvy, where it has made some progress, yet it is not certain that this alone can be the cause of hemerailopia; something more, probably, is necessary to its production. And what seems, in some measure, to strengthen this opinion, is, that the ocular affection is often removed, before any amendment is observable, either in the scorbutic symptoms, or in the abatement of the constitutional weakness. This inference, it is conceived, will be rendered evident from some of the cases brought forward by way of illustration.

And there was further reason to believe, that in some of the worst of these examples, a peculiar condition of the cerebrum, or, perhaps, rather of its vascular texture, was induced by the circumstances to which the patients had been exposed. The particular appearance of the eyes, in some of these cases, likewise indicated a change in the state of the vascular congeries, and, probably, also

an alteration in the nervous function may be included, and, perhaps, that of the retina or optic nerve (which would be virtually equal) more especially. That the sensibility of the retina, in some cases, if not in all, of this complaint, is diminished, seems probable from some considerations. And from such as the necessity of a bright light to impress the eyes sufficiently for the exercise of distinct vision, the widening or dilatation of the pupil, which shows that a similar quantity or degree of light does not produce the customary influence, &c.

Whether all the coats of the eyes undergo an alteration in the condition of their vascular supply, is a question which cannot be readily answered. And even although this vascular fulness may often be observed exteriorly, it is no sufficient argument to conclude that the deeper vessels are also in a state of congestion, or unnatural plentitude. But if this should happen, and the vascular congeries supporting the tunica retina become likewise affected with a comparatively inactive fulness, the perfection of the visual faculty must thereby become greatly affected. And that some change in this respect, in many cases, takes place, is conceived to be very probable. In several of the cases which have come under observation, no doubt could remain of an alteration of condition having taken place in the proportion and distribution of the

blood, as externally discernible. This appearance in the state of the blood vessels, it is admitted, occurs, in many instances, without hemerailopia being the consequence. This occasional state of the blood vessels of the eyes, may therefore be only contingently a concomitant, and not essentially a constituent, of this complaint; but as far as observation has extended, it is a circumstance which should not be disregarded in the management.

Whether a change happens in the natural condition of the humours of the eyes, remains to be determined; and, also, whether the retina itself, or the seat of the sense of vision, suffers any alteration. It is not certain, likewise, but that the refracting power of the humours of the eyes may suffer some change, which remains to be explained. And it continues a question whether the pigmentum nigrum, lining the posterior surface of the ciliary processes, may not also partake of some alteration, either in its quantity, its quality, or arrangement. It has lately been pronounced to be probable, that the sensibility of the retina is diminished; and, perhaps, in some cases, that the pellucidity of the humours of the eyes is also more or less impaired.

It is well known, that when the eyes are affected with any degree of what may be denominated active inflammation, they become more sensible

to luminous impression, and this increase of sensibility is a consequence, especially if the bottom of the eye is affected. When the affection seems to consist, more especially, in a sluggish vascular congestion of the tunics of the eyes, any unnatural sensibility, or uneasiness, upon the exposure to light, is not so remarkable. Many people, for example, have their eyes almost as red as scarlet, even for a length of time, and yet seldom complain of much uneasiness. In examples of hemerailopia, as far as the Author remembers, he never knew any patient complain of pain from these circumstances; but in these instances he never observed any thing like active inflammation, but only a confused extension of red vessels over the white part of the eye; which, in the natural state are not observable. It has been observed, however, in several instances, that the persons complained of pain or uneasiness in the forehead, or temples; and in those complicated with scorbutic disposition, there were also the circumstances of feebleness and listlessness, so commonly accompanying this complaint. This has been such an ordinary occurrence, that, as already observed, in the cases which have fallen under the Author's observation, he is doubtful if ever he has seen a case without less or more of scorbutic disposition at same time subsisting: and as most of the cases have been remarked in tropical climates, or where

the patients have been influenced by exposure in these regions, they have ordinarily been accompanied with uneasiness, or pain of the forehead and temples, and often with the appearance of the eyes abovementioned.

And, moreover, it has been generally, or perhaps constantly remarked, that in these instances of hemerailopia, some alteration of constitutional healthiness, either more obscurely or distinctly perceptible, has intervened, besides the more troublesome ophthalmic complaint. The tongue in some has been foul, or loaded with condensed mucous excretion, the breath foetid, and sometimes a sense of fulness and gravitation at the stomach, and less or more of abdominal tumefaction; and also irregularity, often slowness, of intestinal performance. The surface, in some instances, has been dryish, and the skin rather shrivelled, and the circulation more languid than natural, the pulse being often feeble and creeping. These circumstances, with the muddiness of the eyes, and, occasionally, their bloodshotten appearance, the uneasiness in the frontal region, or temples, with the ascertained existence of the nocturnal blindness, all satisfactorily communicate the intelligence of departure from the healthy state of the functions of the eyes, and also of those of the constitution.

In such cases as the Author has generally seen, it is probable, that there were a change both in

the condition of the blood-vessels and of the nervous energy. It has also been proposed as a question, whether there may not be some alteration in the refracting power of the ocular humours? How far the retina, or its vascular texture, or even the optic nerve itself, may be affected, is not ascertained. Why the common light of day should excite the eyes to moderate vision, and that after sunset, the twilight, or the light of a candle, &c., should not produce distinct vision, is unknown.

If the retina loses in its sensibility, and which diminution may exist in different degrees, it may be easily conceived, that in proportion to this decrease, its capacity of being affected with the rays of light, so as to excite vision, will likewise suffer a reduction. The common light of day may be sufficient to produce a certain degree (perhaps nearly the natural) of vision, while the feeble light of the evening may not be adequate to this purpose. The brisker the light of the day which may have preceded, perhaps the night which follows will seem the more obscure; or that the person who is affected with this disorder will see the more indistinctly. The blaze of a candle, or other artificial light, may rouse the eye to an imperfect or indistinct degree of vision, so that the objects near the light may be dimly seen, while those more remote may appear confused or enveloped in obscurity. If the power of sensation

of the retina then be lessened in a certain degree, (but which may differ very greatly,) so that it can be excited to tolerable vision only by a determinate quantity and strength of light: this may, in some measure, account for the relative condition of the diurnal and nocturnal state of vision, or capacity of the visual faculty. This relative state of the power of vision in the day and night, is, as just hinted, probably often very different in separate examples, so that, in some instances, the nocturnal decrease of the power of vision may approach complete blindness.

This circumstance, however, of the nocturnal diminution of the faculty of vision, appears to be the peculiar characteristic by which this affection is distinguishable. From observation in a number of cases, the Author has reason to believe, that the state of the blood-vessels of the eyes is changed from the natural and healthy condition: but he does not assert that this conclusion is invariably applicable. That the vessels seem in different examples to be affected, is confirmed from their distended state; the increased secretion at the tarsi, the muddy appearance of the eyes, the dusky hue of the eyelids, the lessened lustre or brilliancy of these organs, and the dull show of the pupillary membrane. But from this statement, it is not affirmed that these phænomena are the causes of the complaint, it is more proba-

ble, that in such cases, they are only accompanying circumstances.

There has been reason, in some of the cases, to suppose, that the patient has suffered from incautious exposure to insolation. In tropical climates, or other regions in which much solar heat prevails, the consequences of imprudent and prolonged exposure to its influence, are frequently prejudicial: and in these situations, many dangerous affections of the head are induced; but how far this exposure, of itself, may produce the condition of the eyes, which more immediately constitutes hemerailopia, is not determinately ascertained.

It is well known, that there subsists a peculiar consent between the stomach and the cerebrum, and the eyes are often particularly implicated in the sympathetic derangement. This is an occurrence of frequent observation in many complaints, beside the disorder under consideration.—The Author may perhaps take the liberty to mention what happened many years ago to himself, and this short notice is entered, merely, in the way of illustration. When a student of medicine at Edinburgh, and afterwards, he was occasionally affected with impaired vision, which seemed to proceed from the state of the stomach. He was always aware of its occurrence, from a peculiar sensation at the stomach; which was speedily

succeeded by dimness of vision, (but this latter affection frequently preceded,) so that he could with difficulty distinguish human countenances: after this visual defect had continued for some time, varying at different returns, violent headache commonly followed; which was sometimes relieved by the production of spontaneous or artificial vomiting. The whole affection was removed by attention to the state of the stomach and intestines. As far as remembered, this affection followed no stated times of recurrence.

The general causes, therefore, of hemerailopia, would seem to be those circumstances which tend to alter the state of the constitution; but as far as observation has extended, especially to induce the scorbutic disposition. And frequently along with this, a peculiar condition of the vascular structure of the eyes themselves, and occasionally, likewise, in all probability, of that in the anterior lobes of the cerebrum.

The affection, in some cases, may perhaps be in some measure sympathetic, and depending upon, or originating from, the state of the stomach and intestines. That an intimate sympathetic communion exists between the stomach and the head, has long been an established fact in the history of medicine. And that an intimate connexion in sympathy takes place between these portions of the body, the Author has evident reason to be-

lieve from his own observation in this complaint. The abatement obtained from changing the state of the stomach, and sweeping off offending collu-
vies from the intestines, seems to support and strengthen this inference. In many instances of this affection, he has known the ailment, or defect of the vision, amended, or even removed, before any remarkable improvement could be seen in the general condition of the constitution.

The occasional beneficial effects from a slight change, produced in the manner just insinuated, would lead to the supposition, that in many cases (at least) no original alteration can have taken place in the eye itself; and that, therefore, the cause or causes produce the ophthalmic phænomena in a way which cannot possibly be conceived or explained. The stomach may be deranged in its functions only, so as to influence the visual faculty. This is sometimes exemplified in surfeitings, inebriation, or from the accidental swallowing of some vegetable poisonous substances. The consequences of the action of these, may be impaired vision in various respects: it may be impaired in the capability of determining the boundaries of objects, in ascertaining their colour, their figure, their stability or mobility, &c. Visible objects may also be duplicated or multiplied. If these effects do not prove fatal, the natural condition is commonly soon restored.

In these instances, therefore, it cannot be supposed that the structure of the eyes could have been affected. The changes most probably depend upon an affection of the nervous influence; but here "the cloud sits dark," and no keenness or acuteness can penetrate through the difficulty. Although the nervous energy should be the galvanic influence, as lately conjectured, yet this notion would not diminish the obscurity, or tend to elucidate the nature of the phænomena. Whether the sympathy subsisting betwixt the stomach and chylopoietic viscera, and the encephalon, be explicable, from the connexion which is said to have been discovered or ascertained by Dr. Bock, as subsisting between the great sympathetic nerve and the lenticular ganglion, must be left to future inquirers to determine. That this is a chain of communication in the production of some of these sympathetic phænomena, and among others in hemerailopia, is not improbable.

The nerves supplying the ciliary processes pass out from the lenticular or ophthalmic ganglia, which are situated on the outside of the optic nerves, and are formed each by a ramulus from the nasal branch of the fifth pair, after being connected with the branch of the third pair, which passes to the levator palpebræ and the musculus rectus superior. The same causes, therefore, operating upon the optic nerve in its course, may

likewise influence the lenticular ganglion, and consequently the nervous supply of the iris. If the communication said to take place between the great sympathetic, and the foresaid ganglion, does actually subsist, this may in some measure account for affections of the state of the pupil, when any of the abdominal viscera, to which the great nervus sympatheticus is distributed, is morbidly affected. The stomach, a very important organ in the human frame, and which receives a supply of nervous influence from the par vagum, or eighth pair, when affected or irritated; from its connexions with the great sympathetic, this latter, with the lenticular ganglion, and at least its contiguity with the optic nerve, will in some measure account for the occurrence of some of the phænomena in hemerailopia.

There is an intimate consent between the impression of light upon the retina, and the action of the pupillary expansion: if the sensibility of the former is in the slightest degree impaired, the pupil will suffer a proportionate dilatation. In many instances, when the retina is unusually sensible, the foramen pupillæ is generally contracted to a small point. If it is not readily acted on by the rays of light, the pupil dilates to admit a larger quantity. These different states of the pupil take place in different persons, even without the evident existence of disease. In hemerai-

lophia, along with variable degrees of dilatation, there is a dulness of expression in the eye, which in some cases is very peculiar, but does not admit of a mechanical description. The unusual wideness of the pupils in hemerailopia, it is reasonable to suppose, depends upon the diminished sensibility of the retina; and whether this lessened degree of sensibility originates from the changed condition of the nervous energy, or from an alteration in the supply of blood, or from the complication of these two circumstances.

Although the power of vision may continue tolerable in the daytime, yet, the nervous power of the eyes would seem to be impaired or diminished: and in some cases, the whole nervous energy of the system seems to be lessened or impaired in its operation. The patients often appear dull and stupid, and their feelings also, or powers of sensation, seem to have undergone considerable diminution.—It is very probable, then, from all the circumstances of this affection, that the sensibility of the retina is diminished, and that the blood-vessels supplying the bottom of the eyes (in some cases) are distended beyond their natural allowance; but that this congestion is perhaps not generally accompanied with the circumstances of active inflammation.

In what state the lens is, in this affection of vision, is not determined; or whether it suffers

any alteration in its powers, or deviation from its healthy condition. As already observed, the occasional unusual dilatation of the pupils would indicate that the retinae are not impressed in the customary manner with the rays of light. This circumstance, in the Author's opinion, confirms, or at least strengthens the notion, that although the persons affected with this ailment may not specify that their power of vision is impaired in the daytime, yet this would seem a probable conclusion: but it is commonly in the evening or twilight that their attention is especially drawn to their condition.

The theory of this disease is hitherto extremely lame and incomplete; but upon the whole, from personal observation, it is considered advisable, that sufficient attention should be conferred upon the general state of the constitution; and without this, there is the less probability of removing the ophthalmic indisposition. In the Author's observation of the diseases of the warmer climates, this complaint has, from a careful examination of all the phænomena, been considered, as in most instances, symptomatic. In conclusion of this part of the subject, it may be remarked, that as this affection is so little known, and as it will in some measure be illustrated by the few cases subjoined, it therefore seems unnecessary to enlarge this part of the disquisition.

Section Fourth.

DIAGNOSIS OF THE DISEASE.

THE distinction of this visual affection from others, with which it may be confounded, does not appear to be difficult. The observations already brought forward in the preceding section might suffice without any additional suggestions. At sea, this ailment commonly appears, after a certain continuance of exposure to those circumstances which may be supposed to be requisite to its production. The principal characteristic, is, that the patient complains of his defect of vision in the night-time; or, as commonly happens, he begins to complain of impaired vision in the twilight. If the countenance of a person in these circumstances is closely noticed, a peculiarity may generally be observed, by which the intelligent practitioner is enabled to determine, with tolerable certainty, the nature of the patient's complaint; and more especially if the other phænomena, enumerated in the history of the disease, are taken into consideration. The observer will also regard the time when the person begins to complain, the appearance of the eyes, the length of time, also, he may have been exposed to the probable causes of the complaint, the character of the individual,

whether a sailor or soldier, should not be disregarded; but the discreet practitioner will seldom mistake when he brings all the occurrences and phenomena into consideration. And upon this head, also, it may be further remarked, that in many of these cases, symptoms of scorbutic disposition will be observable. The affection of the eye, with which it is most liable to be confounded, seems to be amaurosis; but from this latter it is conveniently distinguishable by the patient's capability of seeing in the daytime, in cases of hemerailopia, and his dimness or imperfection of vision returning as the vespertine obscureness approaches. When any suspicion hangs over the person's declaration, his movements and behaviour should be cunningly observed, and all the circumstances antecedently enumerated taken into the calculation. If he has stumbled or fallen, or injured his brow or shins against opposing bodies, there is still less doubt of the existence of the disorder. This disease, or, perhaps, rather symptom of disease, is so different from all other affections of the eye, that the intelligent practitioner will scarcely be at a loss in deciding on the nature of the complaint. In the public services, the principal hesitation must relate to trusting to the assertion of any one who may say that he is affected with night-blindness: but in all cases

attended with doubt, the chief marks of the evil complained of should be taken into consideration.

Section Fifth.

PROGNOSIS OF THE DISEASE.

THE next object in relation to this ocular affection, is the determination whether it is of importance, or may be productive of dangerous consequences. The prognosis, perhaps, should, generally speaking, be favourable. Although, it must be acknowledged, that hemerailopia sometimes accompanies a state of constitution which is not altogether free of danger: but this will appear more fully from the first and third cases brought forward in the way of illustration.

The ophthalmic affection, of itself, does not seem to be dangerous; the truth is, it can only be strictly considered as a symptomatic phenomenon; but the condition of body, with which it is frequently, according to the Author's experience, accompanied. And this dangerous condition, it may be remarked, seems to arise, in some cases, in a certain measure, from the state of the brain;—and vascular turgescence or congestion in the encephalon, in the warmer climates especially, has a very hazardous tendency. The state of

weakness and exhaustion, in which it sometimes occurs, is likewise unfavourable; and particularly in situations where the suitable supplies for the sick's restoration are not obtainable. And as this complaint most commonly happens among those on shipboard, and if combined with the debility alluded to, and without the collateral aid of suitable nourishment, the constitution declines until the patient sinks irretrievably. This is sometimes the consequence where the constitution is suffering from scurvy, in which, occasionally, the vital organs become affected, and, from observation, the organs of respiration seem to suffer particularly; the disease terminating with some of the phænomena of peripneumonia nosha, so that the patient seems to die from oppressed breathing, or suffocation.

The affection of the visual faculty has been apparently removed, yet, afterwards, the patient has sunk from a combination of unfavourable circumstances. This possibility of unfortunate concomitants should be kept in view; and, as already insinuated, it should also be remembered, that the seemingly periodical affection of the eyes is almost perpetually symptomatic; and that, even after this is considered as overcome, yet the case may end fatally. The prognosis, therefore, must not (as far as personal observation has extended) be deduced from the condition of the eyes alone,

but the state of the constitution should be taken into consideration.

Hemeraipia of itself is, perhaps in every instance, a curable malady, and that it is only from the degree or nature of its complication that danger is principally to be apprehended. It has indeed already been remarked, that this affection may apparently be subdued, or removed, and, nevertheless, the degree of constitutional indisposition be so considerable as to lead to a fatal conclusion. The unavoidable fatal issue of some cases, may perhaps arise from the unfavourableness of some accompanying circumstances, as it is supposed was exemplified in two of the cases noted in the Practical Illustrations.

Section Sixth.

OBSERVATIONS ON THE TREATMENT OF THE DISEASE.

THE general principles for conducting the treatment, as applicable in many instances of this disease, may in some measure be understood from the cases appended by way of illustration. The generality of the cases which the Author has seen and treated, appeared to be, or indeed evidently were, combined with indications or symptoms of

scorbutic disposition; so that in the plan of cure, a reference was maintained to the modifying influence of this disease. In some cases, also, the state of the encephalon seemed to demand a share of attention. Some of these circumstances have been alluded to in the sketch of the history of the disease. Many of the cases were attended with a sluggish condition of the stomach and intestines, so that these viscera were surcharged with offending colluvies, and in many of such cases it is probable that the hepatic functions were impaired, and that the organ itself was in a state of engorgement, and its vascular congeries overloaded, as was apparently shown by the occasional occurrence of a sensation of heaviness, sluggishness, tumefaction and uneasiness in the right hypochondre. In these cases, too, the alvine motions are often palish, or of a lighter colour than natural; and superadded to these there was commonly a disposition to intestinal slowness, and consequently an aggravation of the whole concomitant and subsequent train of evils not only topically operating, but with diffusive influence through the whole constitution.

In these instances the removal of the offending colluvies from the alimentary channel, should be considered an object of particular and immediate importance; and for this purpose different medicines of the opening kind should be employed.

In those instances, however, complicated with considerable weakness or exhaustion, this must be prudently conducted. For if the patient is suddenly or violently purged, his debility may be speedily increased, and that to a degree implying danger, which in these situations is often one of the most unmanageable circumstances. The stomach and bowels should therefore be cautiously and moderately excited, and the effects of the medicines exhibited, be kept under careful inspection.

If it is considered necessary to induce vomiting, which may be occasionally advisable, it should be effected in the mildest manner, especially when the case is attended with much debility. In some instances of this kind, the antimonial preparations should not be administered, as they may induce, by their violent and difficultly calculable operation, unpleasant consequences. The milder substances capable of producing vomiting should therefore in general be preferred. In cases where the stomach is known to be loaded, its simple evacuation should first be tried, and this is to be performed by those articles which are known to be commonly moderate in their operation. The *Infusum Anthemidis Nobilis* may in some cases answer the purpose; or what the Author has found in different instances to be a convenient emetic, is a compound of the *Ipecacuanha* and

the Sulphas Zinci purificatus. Two or three parts of the former to one of the latter, (or from ten to fifteen, &c. grains of the first, and from five grains to ten or more of the last,) have been observed to operate speedily and effectually, and at same time not to distress the patient so much as the Tartras Antimonii.

In these cases mustard whey, if it could be obtained, would be an useful article in assisting to wash off the contents of the stomach. It may be remarked, also, that this would form a very good drink to those labouring under this complaint. But in the situations where this affection more commonly occurs, it will be seldom obtainable.

It is proper to observe, however, that if the abdomen is distended, that laxative or purgative medicines should be previously administered: and for this purpose the Potassæ Tartras will be found beneficial. It may be given with the Infusum Cassiæ Sennæ; or it may be conjoined with some of the Pulvis Rhei and a little of any of the aromatic powders, which mode of exhibiting it seems to aid the general design. The combination is rather unpleasant, but readily managed by any person of common resolution. The Pilulæ Aloës Compositæ, or the Pilulæ Stalagmitidis Cambogioidis Compositæ, in small doses, have a free effect, but if the dose is large, the latter composition is apt to induce nausea or sickness at sto-

mach, or if it passes into the intestines it may produce undue purging.

The Potassæ Supertartras constitutes a good laxative, or if desirable to increase its activity, the addition of a little of the Pulvis Convolvuli Jalapæ, &c. will improve its operation. As in some of these cases the urinary secretion would appear to be smaller in quantity than natural, and highly coloured, it becomes useful not only as a laxative, but likewise as a diuretic medicine. This remedy often, especially when somewhat aided by any other suitable article, produces plentiful discharges by both the urinary and intestinal outlets, to the great relief of the patient.—If any of the neutral salts are given, the addition of some lime or lemon juice is useful; and is an adjunct which the Author has commonly made in cases of this description, or in cases with scorbutic disposition, accompanied with slowness of the intestines. The addition of the vegetable acid and some sugar, assists in covering the taste of the salts, and the acid appears to be occasionally serviceable in causing them to remain more readily upon the stomach.

The Potassæ or Sodæ Carbonas has been repeatedly given (most commonly the latter) in solution, and followed with as much of the lime juice as might be necessary for the saturation of the alkali. The citrate of Soda thus produced

operates as a moderate laxative, and the carbonic acid disengaged in the stomach during the combination of the acid and the alkali, is sometimes useful in obviating sickness. The Magnesia, or Carbonas Magnesiæ, may sometimes be given with nearly similar intentions.

As offending matter is carried away from the stomach and bowels, very commonly some improvement is observed in the general condition of the patient, and this is ordinarily first remarked in his countenance, sometimes in his movements. The visage becomes clearer and more expressive, and his general aspect exhibits the appearance of relief or amendment; the tongue, which was before perhaps foul, or covered with thickened mucous excretion, and stinking breath, are not afterwards so remarkable. The appetite likewise begins to improve; and here it may be observed, that this is a very critical period with the patient, and an anxious one with the conscientious practitioner; for if there is not the suitable allowance of mild nourishing diet, the case now becomes involved in difficulty and danger; the patient may seem relieved for a little, but this is only a deceitful stillness, and without the assistance of applicable nourishment, the appearance of improvement will end in disappointment.

If the affection of the eyes is combined with scorbutic diathesis, the debility, without the aid

of proper diet, will rapidly increase, and even although the dietetical assistance should come, when this has extended to a certain degree, the patient's doom will be irrevocably determined. Patients in these circumstances pass into a state, in which the gross diet commonly supplied on shipboard becomes disgusting to them, and without the aidance of mild light food, their amendment, even under the most judicious medical management, now is altogether impracticable.— This is a point of such high importance, that a few remarks upon the subject in passing appear necessary.

It is not the medical treatment of the patient alone will suffice, for, if the suitable alimentary supplies are not attainable, there is in those cases, combined with exhaustion or organical distemper, little chance of performing any thing beneficial.

It has been already proposed, that the necessary attention should be conferred upon the state of the stomach and intestines, when, in any instance, they are found to be imperfect in their functionary performances. This attention to the condition of the viscera is undoubtedly a consideration of usefulness, and is one of the first circumstances demanding regard in the plan of management. But even although a happy change may thus be induced, nevertheless, if the general strength is not carefully and regularly supported

and maintained, the patient will gradually, but irresistibly sink, and finally die; if, along with the judicious exhibition of medicines, the vigour of the constitution is not prevented from further declension: and these conclusions are particularly applicable to such cases as are hereafter introduced for illustration.

After the practitioner has satisfactorily ascertained that the person complaining is actually affected with hemerailopia (which can be attended with any difficulty, only in those who seem to be in possession of considerable healthiness of constitution, and little change of appearance in the eyes), the treatment becomes more expeditely applicable. For in cases attended with evident debility, and all the indications already shortly described, little doubt concerning the state of the patient can remain. In these instances the person complaining appears listless, languid, dull, and, in some degree, stupid; and if he has been long confined (that is for three or four months) to sea diet, with the appearances formerly mentioned, his declaration is to be less disregarded. Scorbutic symptoms will now, also, commonly be observable; at least, agreeable to the Author's observation, these will in many instances be remarkable.

As in such examples the bowels will commonly be in a loaded condition, the first object, as has been lately observed, is the removal of all offend-

ing matters from the alimentary channel. This may be considered as the very first indication in the greater number of instances. And afterwards, if deemed necessary, the stomach can be emptied by some of the milder emetics; or, if a greater and more general effect is desirable, the Tartras Antimonii can be employed. But this powerful medicine should be cautiously administered; for, if it operates roughly, it may occasionally produce unpleasant or prejudicial consequences.

If symptoms of scurvy display themselves, the exhibition of the lime or lemon juice becomes necessary; and, if much debility is present, some wine, such as Port or Madeira, should also be allowed. In the whole course of the treatment, the greatest attention should be paid to the state of the bowels; for, unless these are kept in as correct a state as possible, the prospect of amendment is less considerable. The stronger opening medicines may at first be employed; but this should be done cautiously and circumspectly, for looseness is apt to supervene; which, in cases complicated with considerable weakness, may, if suitable supplies of aliment are not at hand, prove quickly dangerous, and not conveniently restrainable. The intestines therefore should be carefully, but cautiously, unloaded: the benefit obtained is not simply the discharge of offending colluvies, but often a change to a more healthful action in the

chylopoietic viscera ; first, more especially, in the bowels themselves, and, progressively, in the organs naturally connected and communicating. Continuing this procedure, the diet should, when possible, be light and nutritive. The patient should be kept clean, both in his body and clothes ; and for obtaining the required degree of corporeal cleanness, the warm salt water bath will be found serviceable. The ablution with the warm salt water, besides the superinduction of cleanness, has a useful operation upon the surface : it gently excites the cuticular structure, and contributes to the removal of occasional cutaneous defecations ; induces an alteration in the state and action of the superficial circulation, and promotes a disposition to healthful perspiration ; which, in many of such cases, is hurtfully diminished. These suggestions merit some attention, for the affection, which is the groundwork of this dissertation, generally occurs in those who are slovenly and dirtily disposed ; and the counteraction of these circumstances will generally be found beneficial.

It has been mentioned, that in some of these instances of hemerailopia, the patient complains of pain or uneasiness in the forehead, or in the temples ; and that, from a consideration of all the circumstances, there is reason to suspect the existence of congestion about the anterior lobes of the cerebrum. These are cases in which, it is believed,

as far as the Author's experience determines, general blood-letting will seldom be admissible. How far the use of leeches might be serviceable, he cannot say, having had no opportunity of deciding by their application in this complaint. The employment of blisters, therefore, has been the most convenient and powerful substitute ; or, the truth is, they are of themselves beneficial, whether topical bleeding might ever be considered necessary. They should either be frequently repeated, or the blistered surface kept in a state of ulceration by means of some irritating ointment.

It has been remarked, that in some of these cases, the nostrils were dry, or that the natural moisture of these parts was lessened. It may be probable, that in some of the examples of this disease, the secretion of tears may have been diminished ; and, consequently, the quantity of moisture passing into the nostrils will be smaller ; for, besides the natural secretion in the nostrils, a portion of the tears passes into them : the actual moisture of the nasal passages is often qualified by the quantity of tears secreted and conveyed into these avenues.

In some cases (as will be observed in those detailed) errhines were tried, and, seemingly, with some advantage. Different articles have been thus administered ; but the *Subsulphas Hydrargyri flavus* has been most commonly employed, or

combined with a little of the Pulvis Zingiberis. But almost any composition capable of irritating the nostrils will answer the purpose. The Author, from some late observations, has some reason to suppose, that the Pulvis Stalagmitidis Cambogioïdis would answer as a sternutatory. These remedies have commonly been used in the evening, when the person was going to repose; but sometimes they were exhibited in the morning. Where there is reason to suppose the presence of a dangerous congestion about the encephalon, the patient should lie with the head raised higher than common, in the night-time. This is a consideration of some importance; and in such cases it may be proper to avoid the employment of sternutatories.

When the stomach and intestines have been suitably emptied, and the other parts of the management properly conducted, the state of the patient's vision will soon undergo a change towards improvement: and of this he will commonly have some evidence, by his beginning to distinguish objects with greater facility in the twilight. The Author has, occasionally, tried these patients with dots, of different sizes, on white paper, from those, perhaps, of half a line in diameter, down to the almost minimum visibilie. The advancement of visual improvement has thus been ascertained,

by the patient's progressive power in the act of distinguishing.

Along with the necessary attention to the condition of the alimentary channel, in instances complicated with constitutional derangements; which, if the writer is allowed to deduce evidence from personal observation, will frequently happen; these latter must receive the requisite share of attention. If scorbutic disposition is prevalent, it must be combated with the most suitable remedies and diet; for, it may again be observed, that without the aid of proper alimentary supplies, the most judicious exhibition of remedies will be unavailing.

In those cases combined with affection of the brain, as indicated by the constant pain across the forehead, or shooting through the temples, with the appearance of fretfulness and corrugation of the integuments of the brow, and the dull, lurid, stupid aspect, the bloodshot and bleared state of the eyes, the practitioner should be careful in his observation, and efficient in his practical ministration.

In conjunction with the means already specified, the Author has sometimes applied some volatile vapour, such as that of the ammonia; in the condition, either of an aqueous or spirituous solution, as commonly presented in the forms of the *Aqua Ammonia Carbonatis*, or the *Alcohol*

Ammoniatum. But, in most cases, it is perhaps advisable to avoid any applications to the eye itself, so that the alterations produced in the state of vision, are more distinctly observable to be the consequences or effects of the impressions of the remedies administered, for meliorating the general condition of the constitution.

It is not intended, in this publication, to enter into a consideration of the observations of others upon this ocular affection; but, principally, to make some remarks upon it as it has appeared to personal observation, and to give an illustration of this affection when complicated with something important in the state of the constitution, and, therefore, demanding something particular in the plan of management.

Many instances happen in which this complaint may be both readily and speedily removed, and in which there is no perceptible dangerous qualification. Cases may even occur, in which, by some slight change of diet, or other circumstances, the affection may disappear without the assistance of any remedial applications. Whether there may be a necessary connexion betwixt this complaint and a particular state of the encephalon, the Author has not, from his own observation, been enabled to ascertain.

It is mentioned that hemerailopia is endemic in some places of Asia, the Brasils, the West Indies,

Poland, &c. : whether this statement be veritable, or how the affection is to be accounted for, in these situations, he has not obtained any satisfactory information. He has had several cases under treatment, in which the complaint (or rather symptomatic indisposition) was removed with tolerable readiness, and was apparently dangerless. But he has brought forward two examples of complication, from which, and the generality of his observation upon this complaint, he conceives it advisable, that practitioners, especially in the warmer climates, should not be inattentive to its management in all its circumstances. In those instances which terminated fatally, the Author has to lament more the inconvenience of circumstances, than, probably, the incurable nature of the ocular disease: for, even in the few cases of complication ending unfavourably, the patients had regained the common or natural power of vision, and that they seemed to die from the consequences of the state of constitution, arising, perhaps, in part from the condition of the organs of respiration, of that of the encephalon; or, generally speaking, from a state of constitutional weakness or impoverishment, from which no person recovers, unless placed in more advantageous circumstances than are frequently found to prevail on shipboard. It appears unnecessary to

enlarge on this part of the subject, as it is sufficiently illustrated by the cases subjoined.

Section Seventh.

MISCELLANEOUS ANIMADVERSIONS UPON THE PECULIARITY OF THE ANTECEDENTS COMMONLY NECESSARY FOR ITS PRODUCTION, AND ON ITS COMBINATION WITH OTHER COMPLAINTS.

IT has been already stated, that, in the Author's observation, this affection has been remarked to be commonly attended with that state of the system which forms the scorbutic disposition. But whether this conclusion applies to those instances which have been observed on land, he has had no opportunity of determining. How the eyes, in particular examples, should be affected with this peculiarity, and not in others, even when evidently influenced with the scorbutic disposition, is likewise unknown. In those affected, it is reasonable to conclude, that, besides the general alteration of the system, the state of the eyes themselves must also suffer some derangement. Some suggestions upon this subject have been formerly made; that, in those instances in which nocturnal blindness takes place, scurvy should be considered the cause, and the ocular ailment an

effect, is a proposition which is not satisfactorily explainable. That this complaint may occur without any evidence of scurvy in the body, is likewise probable, and the contrary of this is frequently observable.

There is one case reported, in which the person was affected with dimness of vision after sunset on shipboard, even in harbour, but free from it when on shore. The example to which allusion is made, is narrated in the manner following:

“ A man, about 30 years old, had, in the spring, a tertian fever, for which he took too small a quantity of bark, so that the returns of it were weakened without being entirely removed; he therefore went into the cold bath, and after bathing twice, he felt no more of his fever. Three days after his last fit, being then employed on board of a ship, in the river, he observed at sunset, that all objects began to look blue, which blueness gradually thickened into a cloud, and not long after he became so blind as hardly to perceive the light of a candle. The next morning about sunrise, his sight was restored as perfectly as ever. When the next night came on, he lost his sight again in the same manner; and this continued for twelve days and nights. He then came ashore, where the disorder of his eyes gradually abated, and in three days was entirely gone. A month after he went on board of ano-

ther ship, and after three days' stay in it, the night-blindness returned as before, and lasted all the time of his remaining in the ship, which was nine nights. He then left the ship, and his blindness did not return while he was upon land.—Some little time afterwards he went into another ship, in which he continued ten days, during which time the blindness returned only two nights, and never afterwards.

“ In the August following he complained of loss of appetite, weakness, shortness of breath, and a cough; he fell away very fast, had frequent shiverings, pains in his loins, dysury, and vomitings; all which complaints increased upon him, till the middle of November, when he died. He had formerly been employed in lead-works, and had twice lost the use of his hands, as is usual among the workers in this metal.” *London Medical Transactions, Vol. I. p. 60.*

The history of this case (although many things are wanting to render it complete) abundantly proves what has before been repeatedly suggested, that this affection of the eyesight is, at least occasionally, combined with dangerous aberrations of constitutional healthiness. In this instance, at one period of the account given, there appeared to have been a distinct tendency to an intermittent disposition. It is probable too, that in this case the chylopoietic viscera were unsound,

which state might arise from two special causes, the ague under which he is said to have laboured, and the effects of the metal with which he had been influenced.

By way of additional illustration, the Author will take the liberty of entering the following example :

“ Pye, servant to a miller, at the sixth mill on the Lime-house wall, about forty years of age, came to me, (the case is reported by Dr. Samuel Pye,) October 2d, 1754, for advice and assistance. He told me, that, about two months ago, while he was employed in mending some sacks, near the setting of the sun, he was suddenly deprived of the use of his limbs and of his sight. At the time he was attacked with this extraordinary disease, he was not only free from any pain in his head or limbs, but, on the contrary, had a sensation of ease and pleasure; he was, as he expressed himself, as if in a pleasing dose; but perfectly sensible. He was immediately carried to bed, and watched till midnight; at which time, he desired those who attended him to leave him, because he was neither sick nor in pain. He continued the whole night totally blind, and without a wink of sleep.

“ When the daylight of the next morning appeared, his sight returned to him gradually, as the light of the sun increased, till it became as

perfect as ever; when he arose from bed his limbs were restored to their usual strength and usefulness, and himself in perfect health.

“But on the evening of the same day, about the setting of the sun, he began to see but obscurely, and his sight gradually departed from him, and he became as blind as on the preceding night; though his limbs continued as well as in perfect health; nor had he, from the first night, any complaint from that quarter.

“The next day, with the rising sun, his sight returned; and this has been the almost constant course of his disease for two months past. From the second night, the symptoms preceding the darkness were a slight pain over the eyes, and a noise in his head, which he compared to a squashing of water in his ears.

“After near two months continuance of the disease, on September the 29th, the patient was able to see all night; on the 30th September, October 1st and 2d, he was again blind all night; on the 3d, he was able to see; on the 4th, he was blind till twelve; on the 5th, was blind. From this he had no return of his complaint till June, 1755; from which time till the 3d of October, when I again saw him, he had three or four attacks; from the 3d till the 10th, he had an attack every evening. He had at this time a purging. I ordered him an electuary of bark and

nutmeg, which succeeded in removing the blindness, but the diarrhœa continued wasting him. On the 20th, delirium came on; on the 21st, he became deaf; he died on the 25th, after having suffered, from fever, pain in his bowels, and continued diarrhœa; but the defect in his eyes never returned after the 10th. This man had clear bright eyes: when his sight failed him the pupils were enlarged about one-third in diameter."—*Medical Facts and Inquiries, Vol. I. p. 111.*

Some of the facts, stated in this case, tend strongly both to illustrate and confirm what the Author has already stated from his own observation. In this example, it is probable that there were some affection of the brain, but of an obscure nature, at least, which could not be ascertained from the symptoms; but, perhaps, at first vascular fulness or congestion existed, and afterwards effusion somewhere in the encephalon. That the brain was seriously implicated, seems to be further confirmed from the symptoms which unfolded themselves towards the termination. This case, moreover, tends to establish a remark formerly made, that the peculiar affection of the eyesight may be overcome, and, notwithstanding, the case prove fatal from a complication of other circumstances.

It is probable, then, from the tenor of the second case, that the complaint had some affinity

to apoplexy, or paralytic affection; which, in as far as relates to the state of the encephalon, originates from, and is manageable upon, the same principles as apoplexy. It was formerly mentioned, that it is probable, that this affection has some relation to amaurosis; and that, in some instances, they both are connected with disorder of the brain, and this bordering upon that condition which lays the foundation of apoplexy. This seems to strengthen the opinion, which the Author has ventured to advance, that hemerailopia is occasionally complicated with a dangerous state of vascular congestion at the encephalon, and that these cases always require careful attention and discrimination for their management.

The case of the man, reported by Dr. Heberden, had originally been an example of intermittent, and, more especially, referable to the form of tertiana. Although the Author has had many instances of ague under his charge, yet, he does not remember one case complicated with hemerailopia. Why the man, mentioned by Heberden, should have been affected with nocturnal blindness while in the ship, and free from it when on shore, is altogether involved in obscurity.

This man, as lately observed, had been exposed to the influence of the poison of lead, and had been thus considerably affected by this deleterious substance; but how far this, in combination with

the intermittent, might be conducive to the production of hemerailopia, is a question unanswered.

From a due consideration of hemerailopia, in all its circumstances, it seems probable, that, in many cases, it arises from an affection of the nervous energy of the eyes, and, perhaps, more especially, of the optic nerves, which supply the seat of the sense, the retinae. And, in addition to this also, it is further supposed, that, in some cases, the blood-vessels are affected. But still the assumption is, that this disorder is commonly or constantly symptomatic, and therefore this circumstance should be kept in remembrance by the practitioner. And a consideration of importance is, of what nature and amount the affection may be with which it is complicated; whether scorbutic disposition, or such combinations as may be supposed to have occurred in the two cases communicated. This is a point of the greatest moment in forming the prognosis, for this should, in a great measure, be determined from the real nature and degree of the combination.

It is the primitive disorder, therefore, which the medical attendant should keep in contemplation; for, without this precaution, the ophthalmic complaint may continue for a length of time, or even seem to be incurable, or be troublesome, until the person obtains a change of circumstances; or even till the more general affection, with which the noc-

turnal blindness may be combined, produces a fatal termination. Upon the whole, this disease, in the observation of British practitioners, most commonly occurs at sea: and, in many cases, without the appearance or existence of any more diffused disease; this has been asserted; but this allegation the Author is led to disbelieve, and must conclude, that, in all these cases, if they had been sufficiently scrutinized, some deviation from the standard of health should have been discovered.

In the examples of this affection, which the Author has witnessed, a certain length of time seems requisite to the production of this disorder. But further, it may be observed, that, in addition to a particular time of exposure, a concurrence of certain circumstances is apparently requisite to the evolution of this complaint. And after all that has been said upon this subject, by different observers, the Author must maintain this conclusion, until the contrary be established, that hemerailopia is almost constantly symptomatic; and that, upon changing the state of the constitution, or perhaps, in some cases, improving that of the stomach and alimentary channel, this affection will disappear.

In the course of the Author's observations, the disease has seemingly been, in almost every case, symptomatic; and that a certain concurrence of precedaneous circumstances seemed necessary for its production. The scorbutic disposition might

be generally considered as one of these; and, occasionally, unavoidable or incautious exposure to the powerful influence of insolation seemed to be accessory to the production of hemerailopia. It is probable, also, that the nature of the diet and drink should be taken into consideration, in attempting to elucidate the predisposing and concomitant causes of this complaint. It may be said, that the scorbutic state, existing in some of these cases, is thus engendered.

It is well known that some animals, which prowl for their subsistence in the dark, cats, lions, lynxes, &c., possess a natural acuteness of vision, and see better in an obscure light than most animals. There is, likewise, an original difference in the power of vision observable in the human race: some individuals see better in the dark than others. The horse, too, is an animal which sees better than man in a weak light. In these animals the pupils have the power of contracting and expanding much more than in mankind. In that familiarized animal the cat, this expansion and contraction of the pupils, and, also, the capacity of seeing in the nocturnal obscurity, is wonderfully exemplified. The pupillary membrane of this animal is capable of dilating almost to its connexion with the choroid; and then of contracting to a vertical line, so that its approaching margin comes almost to contiguity. This animal

sees well both in a clear and dull light; but proportionally better in a certain degree of obscurity.

In the dimness of vision which takes place in hemerailopia, in an obscure light, it is likely that, from the operation of the causes of the disease, the eyes assume a state in which they are excited to distinct vision, in a certain degree of light only; and that they are thus rendered capable of tolerable vision by a certain measure of luminous impression: and that, therefore, the light, from sunset to sunrise, is not sufficient to produce in the eyes the suitable impression of the images of surrounding substances. Whether the exposure to bright light, in company with the other circumstances, may so affect the nervous faculty of the eyes as to cause this disease, remains to be determined. The bright light, along with the solar heat, must have great effect upon the eyes and the brain, seems a fact beyond all controversy. And, further, that they have, by their continued operation, the power of weakening and unfitting the optic nerves; or, which is in effect nearly the same, the retinae, which are their expanded extremities, would appear a probable conclusion. But why this should be the case in some instances only, and not become a general or common affection, in apparently a similitude of circumstances, is not determinable.

The Author has seen this affection in eyes of different colourings: for example, he has known it in a Chinese, whose eyes were of a darkish or blackish colour: and he has seen it in a Dane, or Swede, whose eyes were cerulean. The particular colour of the eyes, therefore, cannot properly be considered as an antecedent property especially favourable to the causation of this peculiar ocular complaint. A conclusion has been drawn, by some, from the circumstances of their own observation amongst British subjects, when carried to warmer climates, on shipboard, that this affection occurs, almost exclusively, among those with blue or light eyes. But general knowledge should never be circumscribed in conformity to the observation of individuals.

It has been said, that this affection of the eyesight has been observed to amount to a fifth part, or more, of a ship's company, or one in twenty, or even in a more extensive proportion. It has been observed, more especially, in the warmer climates; and to happen after the men had been exposed, for some months, to sea diet, and brisk heat, and light; so that it has been observed to prevail in ships in the East and West Indies, and in the Mediterranean.

From all the information upon the subject, it may be collected, that a particularity of circumstances seems necessary to the successful produc-

tion of hemerailopia; and that the generality of these occurrences predispose the body, either by a general or topical operation, for the unfolding of this complaint. Whether there may be a natural condition of the human eye, which may predispose to the occurrence of this ophthalmic complaint, upon the application of the circumstances constituting or causing the contributing qualification, is not ascertained. The principal of the antecedents, which are ordinarily necessary for the production of this ailment, are the continued exposure to the influence of a certain kind of diet; perhaps also to the operation of a certain elevation of temperature; perhaps also to a certain degree of brisk light. But of all the known preceding circumstances, disposing to the production of this ailment, there appear none more probably operative than the diet generally supplied; the ordinary exposure, to which seafaring people are so commonly obnoxious; and one of the chief accompanying circumstances seems to be, the superinduced state of the constitution generally; and often of the stomach and intestines topically; and an alteration in the condition of the nervous energy of the eyes themselves.

The degree and continuance of the application of the circumstances predisposing to this complaint, may be unequal in different instances. But to bring these scattered remarks to a con-

clusion, the Author must again expressly maintain, that perhaps every example of the complaint under consideration, notwithstanding what has been said to the contrary, may be deemed symptomatic; or that there subsists some alteration of the system whether more or less conspicuous. The affections, with which it appears to be most commonly complicated, are derangements of the stomach and intestines; or chylopoietic viscera, in general; scorbutic disposition, affections of the brain, but whose nature are obscure, or not determined; and perhaps with a change of the organs of vision themselves; and which will, in these instances, form the essence of the complaint.

Section Eighth.

PRACTICAL ILLUSTRATIONS OF HEMERAILOPIA.

CASE FIRST.

November 15th, 1810.

S. F. ætatis 17, says that he is blind, pupils appear wider or more dilated than natural, but seem to contract and dilate according to the de-

gree of light; tongue clean, gingivæ possess nearly their natural firmness, the legs are spotted with some leaden coloured maculæ, and some pustules interspersed. The abdomen is tumefied, and he admits some pain nearly in the seat of the spleen, but none in the right hypochondre. Has been frequently troubled with vermes. He possesses naturally a stupid aspect. The eyes are of a lightish blue colour, with a dingy circle in the course of the orbiculares palpebrarum. P. rather feeble, but not unusually frequent.

℞. Supertartratis Potassæ unciam.

Pulveris Rhei Palmati grana decem illico capienda. Et vespere Sumat Potassæ Sulphatis drachmam. To have some Sago.

16th. Several alvine motions, and passed a few lumbrici teretes yesterday, appears a little clearer in the visage; other symptoms stationary.

℞. Sulphatis Ferri grana triginta.

----- Potassæ drachmam.

Succi Citri Medicæ communis semunciam.

Aquæ uncias decem.

Sacchari drachmas duas, misceantur. Tribus vicibus sumenda, eunte die.

17th. A few motions since yesterday. Purplish maculæ, &c., remain upon the legs; urine highly coloured; some discharge from the tarsi oculorum; can distinguish the figures on the

dial-plate of a watch. Repetatur mistura ut here Sago, &c.

18th. Was seized with some pain in the epigastrium in the course of the night; mouth, he says, insipid; belly open; no other particular change. Omittatur mistura Sulphatis Ferri.

℞. Submuriatis Hydrargyri grana octo.

Pulveris Rhei Palmati grana decem; statim sumenda.

℞. Succu Citri medicæ semiunciam.

Vini Rubri uncias duas.

Aquæ libram, Sacchari semiunciam. Pro Potu utenda. Continuetur Sago.

18th. Vespere. Only one stool in the evening when he received Submuriatis Hydrargyri grana quinque et Pulveris Rhei Palmati grana octo. Sumat etiam Olei Ricini communis unciam. Et cras primo mane Submuriatis Hydrargyri grana octo Pulveris Rhei grana decem, forma boli.

19th. Three or four alvine motions since yesterday; some films in the last this morning; a little oozing of matter from the tarsi; and specifies a sensation of uneasiness in the course of the levatores palpebrarum superiorum. Urine brownish; P. rather feeble, but not unusually frequent. Habeat statim Olei Ricini unciam; et tertia hora ad hesperum, Submuriatis Hydrargyri grana tria et Pulveris Rhei grana quinque. Repetatur Potus, Sago, &c., Præterea.

℞. Submuriatis Hydrargyri grana tria.

Sacchari Albi scrupulum intime terantur fiant partes quatuor. Naribus fortiter inhale-
tur una, mane et vespere.

Vespere. Some degree of fever; P. about 96; is rather small, and labours; has received two doses, in the course of the day, of the purging powders; some unusual warmth of surface; complains of pain in the pit of the stomach, with some acidity; abdomen continues tumid.

℞. Carbonatis Magnesiæ drachmam cum semisse.

Pulveris Rhei Palmati grana triginta.

———— Carbonatis (ligni) grana triginta;
illico sumenda.

20th. Two large stools in the night; the feculent discharge has generally contained some hardened matter, of a brownish colour, and of a form somewhat similar to sheeps' excrements; no change in the faculty of vision; the palpebræ are cemented together, in the mornings, by the adhesive discharge from their edges.

℞. Pulveris Ipecacuanhæ scrupulum.

Tartratis Antimonii grana duo; statim sumenda. Eorumque operationê finitâ, Capiat.
Carbonatis Sodæ drachmam.

———— Ligni drachmas duas.

Pulveris Rhei Palmati grana triginta. Deinde Habeat Misturam Acidam, &c.

Vespere; hora septima. Four pretty large alvine motions, with some hardened feculent matter; abdomen more pliable, and not so distended. The medicine produced sickness, but no vomiting. *Repetantur Pulveres Carbonatis Sodæ, &c.*

21st. Abdomen considerably detumefied; one stool this morning, of a darkish colour. Has been occasionally troubled, especially when attempting to swallow, with a sensation of straitening at the trachea or larynx. Small ulcers on the legs, in the seat of some of the darkish coloured maculæ. T. clean; P. of middling frequency. *Ulcuscula in cruribus illinantur Unguine Acidi Nitrosi. Oculis inseratur aliquantulum Unguinis Nitratis Hydrargyri Mitioris Camphorati omni nocte. Repetatur Succus Citri Medicæ ut heri.* One bottle of Spruce-Beer daily; Sago, &c.

Vespere. One alvine motion, with some of the indurated matter in it. Abdomen continues subsiding; pain, at the scrobiculus cordis, removed; T. clean and moist; ointment smarts the eyes gently, &c. *Repetatur Pulvis Carbonatis Sodæ et Ligni. Cras summo mane Sumat olei Ricini Unciam unam cum semisse.*

22d. One stool this morning, more of natural appearance. Eyes rather clearer, and the pupils contract, &c, more readily. *Repetantur Unguina oculis et cruribus, et Mistura Acida, Sago, &c.* He has a roll of bread in the morning.

Vespere. Four alvine motions, and the three last of a blackish colour. *Continuentur medicamina.*

23d. One stool this morning of a blackish colour, &c.; other circumstances nearly stationary. *Capiat olei Ricini unciam. Iterentur alia.*

24th. Two stools of a blackish colour; abdomen appears now of natural volume. P. middling; T. clean; still some viscid matter on the eyelids.

℞. *Succi Citri Medicæ uncias duas.*

Aquæ libram.

Sacchari semiunciam; misceantur, in die utenda. Repetentur unguina.

Vespere. Four large stools of a blackish colour; and he is in all respects better. *Repetatur oculis.*

25th. Two stools of a yellowish colour. He is now somewhat reduced. *Continuentur Potus acidus Vegetabilis cum Vini rubri (apud Nostrates, Port.) unciis duabus. Sago p. r. n. Unguen oculis, &c.*

26th. Says that he had several motions in the night, but appearance unknown. Pupils of more natural appearance; but the eyes are suffused, and some matter forms betwixt the palpebræ. Not much change in the blotches on the legs, &c. *Continuentur Remedia, sed augeatur succus ad uncias duas cum semisse.—Vespere. Five liquid yellow stools; vision amending. Capiat Pulveris Ipecacuanhæ C. grana sex.*

27th. Says he had several yellowish stools in the night: no other particular change. Habeat Succî uncias tres in mistura.

Vespere. Tendency to diarrhœa, but no pain; fœces of a yellow colour.

℞. Tincturæ Acaciæ Catechu drachmam.

Carbonatis Calcis scrupulos duos.

Tincturæ Opii, guttas viginti quinque formâ
haustûs horâ decubitûs sumenda.

28th. An abscess has formed on the outside of the patella of the right knee. It extends over the outer condyle of the thigh bone, and downward to the head of the fibula; a small opening has taken place over the patella; the matter discharged is of a bad quality, mixed with blood. A small phlegmon formed on the patella sometime ago. Diarrhœa suspended. Fiat incisio parva, parte inferiore exterioreque abscessûs. Applicetur Solutio Cerrussæ Acetatæ.

℞. Pulveris Cinchonæ grana triginta.

Tincturæ Opii, guttas decem.

Confectionis Aromaticæ grana quinque.

Aquæ uncias quatuor. Capt. m. et v. Re-
petatur mistura acida.

Vespere. Some recurrence of looseness, tongue dry along the middle. Some inflammation of the teguments of the abscess. Sumat haustum ut here vespere.

29th. Notwithstanding the draught, he had six

or seven liquid yellowish stools since last evening. His vision is better; tongue moist. Abscess and phlogosis of the integuments falling, but complains of pain and stiffness in the knee; considerable discharge, which is chiefly bloody. Augeatur succus ad uncias tres cum semisse, et vinum ad uncias sex. Repetatur etiam Cinchona, sed unicuique haustui addantur

Tincturæ Acaciæ Catechu drachma.

———— Cinchonæ compositæ eadem.

———— Opii, guttæ quindecim.

Continuetur Solutio Cerussæ Acetatæ (grana decem Aquæ unciæ) sæpeque renovanda.

Vespere. Some diarrhœa in the course of the day, but in other respects relieved, although he is now considerably reduced. In vespertina misturæ Cinchonæ dosi, Augeantur Tinctura Catechu ad drachmas duas et semissem, Tinctura Opii ad guttas quadraginta et quinque.

30th. Abscess collapsed, and inflammation of integuments subsiding; some bloody discharge continues; joint easiest in the extended posture. T. brownish and dryish along the middle. P. extremely feeble; some diarrhœa continues; a little matter forms betwixt the eyelids, but his vision as much recovered as circumstances will permit. Omittatur Succus Citri. Repetatur Mistura Cinchonæ, &c. Habeat Vini Madeirensis, uncias sex e Decoctu Sago. Ulceribus et incisioni genu

applicetur Unguen Oxygenatum linteo, supraque stupas esse imponendas, omnia et fascia lanea stabilienda.

Vespere. P. about 100, and a little firmer; T. dry but clean; knee has been easy; six alvine motions, but no uneasiness in the intestines; some thirst. In haustu Tinct. Opii guttæ triginta quinque. Capiat Camphoræ f. pilulæ, grana sex. Habeat Succu Citri semiunciam, &c.

December 1st. Four or five stools, liquid and yellow; knee as well as can be expected. Omitatur Cinchona.

℞. Tincturæ Acaciæ Catechu semiunciam.

Carbonatis Calcis Præparati drachmam et semis.

Tincturæ Opii guttas quinquaginta.

Olei Lauri Cassiæ guttas quatuor.

Aquæ uncias duodecim, misceantur.

Sumat uncias tres tertia hora, Vinum et Sago ut here.

Vespere. Some diarrhœa, but in other respects pretty easy. Has taken some soup. Continuatur mistura; etiamque Capiat Pulv. Ipec. Comp. grana decem.

2d. Six or seven motions in the night, but no griping. P. feeble; T. dry; some appetite. Repetatur Mistura ut here, sed Augeatur Carbonas Calcis ad drachmas tres. Sumat uncias tres se-

cunda hora. Vinum ut herè jusculum bovinum et panis fermentatus, &c.

Vespere. Five stools without pain. P. scarcely perceptible at the wrist, and the extremities are coldish.

℞. Amyli drachmas tres.

℞. Aquæ ferventis uncias sex.

℞. Tincturæ Opii drachmas duas, quam primum forma clysmatis injicienda.

Continuetur Mistura, sed Augeatur Tinctura Catechu ad unciam et Carbonas Calcis ad semiunciam, addaturque Confectionis Aromaticæ drachma. Vini Madeir. uncias sex.

3d. P. this morning a little more distinct; T. dry and hard; diarrhœa continues; nothing particular in the matter voided; no tormina; no tenesmus; knee pretty easy. Continuetur Mistura. Habeat Vini uncias duodecim vel plus, jusculum bovinum. Capiat Pulveris Ipecacuanhæ compositi grana quinque ter in die.

℞. Acetatis Zinci grana triginta.

℞. Aquæ ferventis uncias quindecim.

℞. Tincturæ Opii drachmas duas; misceantur, unciæ quatuor ter in die f. clysmatis injiciendæ.

Vespere. Diarrhœa has continued through the day. The clysmas has been tried several times; but they were quickly rendered. The last was prepared with 5 grs. of the acetate to aquæ $\mathfrak{z}i$;

and there has been longer respite than for a similar period during the day. P. continues very feeble; T. dry and hard. Sumat Vini uncias sex in nocte. Continuetur Mistura. Sumat et Pulveris Ipecac. Comp. grana decem, Camphoræ grana octo, Confectionis q. s. forma boli hora nona.

4th. P. about 90, and small; T. parched; some uneasiness at stomach; a few stools in the night. The surface has regained its natural warmth. Continuentur medicamina. Juris bovini poculo sæpe utendum. N. B. To keep himself closely covered, and lie as quietly as possible.

Vespere. Only about three stools since morning; passed about one ounce of coagulated blood in the evening; uneasiness in epigastrium continues. Continuentur remedia.

5th. P. about 96, and continues feeble; T. parched; diarrhœa at present nearly suppressed. He dozes, but no perfect sleep. Contin. medicamina, sed Sumat Misturæ uncias duas tertia hora tantùm. Repetatur bolus.

Vespere. P. extremely feeble, and extremities coldish. Passed a little more coagulated blood. He passes urine regularly, but no fæces observable; visage pallid for some days; T. dryish and hardish. He has had some difficulty in swallowing for some days. Habeat vini uncias decem cum jure bovino in nocte. Sumat Acidi Nitrici guttas decem f. h. statim.

6th. Diarrhœa suppressed. P. so frequent that it can scarcely be numbered, and feeble; T. and the whole mouth dry; warmth rather increased. He is become fretful when touched, and tosses the arms. Omitt. Mist. Tinct. Catechu.

℞. Camphoræ grana decem, Sacchari drachmam.

Pulveris Gummi Arabici drachmas duas.

Spiritus Ætheris Nitrosi drachmam.

Aquæ uncias decem misceantur. Sumat uncias duas secunda hora, etiamque vini uncias duas. Toti Capiti applicetur Emplastrum Cantharidum.

Died in the afternoon, betwixt three and four o'clock.

COMMENTARY

UPON THE CASE AFORE-MENTIONED.

The following remarks were noted about the time, or shortly after, this case occurred.

“When this miserable creature subjected himself to remedial assistance, he laboured under Hemeralopia, (most commonly, but most absurdly, called Nyctalopia,) and several symptoms of scorbutic ailment. The peculiar maculæ and stigmata upon the inferior extremities,—the stiffness or rigidity of the tendinous and other structure about the knees, the general feebleness and languor, &c. &c.,—the circumstances to which he had pre-

viously been exposed, &c. &c.,—and manifold appearances, which need not be specifically enumerated,—completely establish the confirmation of the existence of the foresaid complaint. In this case, the vessels of the coats of the eyes were more numerous (in specie) and distended than natural. The eyes had a confused and suffused bleared appearance; his aspect was stupid, listless, and artless. The dunnish or duskish circle, in the course of the muscoli orbiculares, was peculiar. The tumefied abdomen was an unfavourable circumstance, and although perhaps originally produced by, yet afterwards aggravated, the general indisposition. The abdominal tumefaction principally depended on excremental accumulation. This certainly (in the warmer climates especially) is a fruitful cause of manifold distempers, and anomalous symptoms. The papulæ, pustulæ, &c. upon the inferior extremities, attended with enfeebled inflammatory disposition, were produced by the scorbutic habit, and the influence of nastiness on the surface.

In the curative attempts, it was considered especially necessary to dislodge offending matters from the intestines; and, in prosecution of this intention, some of the acidulous Tartrate of Lixive was exhibited, and a small doze of sulphate of the same was given in the evening, as a useful opening medicine.

Second Day, (Nov. 16th.) The discharge of the lumbrici confirmed and answered the inquiry applied to him, whether he had been troubled with worms in his childhood, &c., and likewise suggested the propriety of exhibiting the Ferri Sulphas. The lime-juice was combined with the view of combating the scorbutic symptoms. The discharge of several stools, and the removal of several teretes, the slightly improved visage, declared some beneficial alterations.

Third Day, (Nov. 17th.) The general method adopted was considered advisable, and therefore prosecuted.

Fourth Day, (Nov. 18th.) The uneasiness at stomach, might have been induced by the mixture slightly offending the stomach. As the fullness of the abdomen continued, purgative remedies were prescribed, and of these the Submurias Hydrargyri et Rheum Palmatum were employed. As the weakness was considerable, a little portion of wine was conjoined with the mixture. The Oleum Ricini was given as an useful coadjutor with the other articles given as cathartics.

Fifth Day, (Nov. 19th.) Notwithstanding the quantity and activity of the medicines administered, only three or four alvine motions were procured. On this day, an increased discharge of tenacious matter from the palpebræ, and, for the first time, he specified some pain in the course of

the levatores oculorum. His movements were languidly performed. The P. partook of the general debility; the only favourable properties in it, at this time, were its moderate frequency and regularity. The opening medicines were continued, according to this day's report. In the evening, symptoms of febrile irritation prevailed. The P. at 96, with unnatural warmth of surface. The powders were ordered to be inhaled by the nostrils, for the purpose of gently exciting their lining membrane, and therefrom soliciting an increased secretion. The nostrils were rather inclined to dryness. The Carbonas Ligni was given from some reputed notion of its influence in obstinate slowness of the intestines; but in this the Author had little confidence.

Sixth Day, (Nov: 20th.) The two copious alvine dejections produced some relief. It now also became more evident, that the intestines must have contained (and perhaps for a length of time) indurated feculence, (commonly called scybala, but incorrectly; for the term implies no more than the Latin word stercora, but does not directly express quality). The emetic was prescribed on purpose to dislodge any offending matters from the stomach, and thus probably relieve the uneasy sensation. And afterwards the opening, &c. medicines specified in the report were exhibited.

Seventh Day, (Nov. 21st.) Considerable pro-

gress obtained in emptying the intestines of their hurtful contents; and which contained the hardened brownish (rather darker than the softer part of the excrement) massulæ, as formerly mentioned. The medicines designed to produce vomiting, but only causing sickness, bespoke a disordered condition at least of the functions of the stomach. The articles exhibited were possessed of approved qualities. It is farther mentioned, that the abdomen was considerably detumefied. The darkish colour of the dejections, most probably, arose from the powdered charcoal. The sensation of straitening, constriction or strangling, at the larynx, frequently occurs in irritations of the intestines, arising from various causes. This feeling in the throat sometimes happens when worms are nestling in the alimentary channel; but no future evidence of this was obtained. The purging powders were continued. The little ulcers, &c. on the legs, were besmeared with some of the Unguentum Oxygenatum (adipis Suilli uncia, Acidi Nitrici guttæ triginta). The diseased borders of the eyelids were likewise anointed with the Unguen Nitratis Hydrargyri, blended with a small portion of Camphor. The lime-juice being now both scarce, and only of middling quality, one bottle of Spruce Beer was daily obtained for him. He was especially unfortunate in not receiving the aid of suitable provisions.

Eighth Day, (Nov. 22d.) On the preceding evening, it is mentioned that the abdomen continued subsiding, and that the uneasiness at the scrobiculus cordis was removed; the tongue clean and moist. These were naturally considered to be at least rather favourable circumstances. The alvine motion is also said to possess more of the natural condition, especially with regard to colour, &c. The change in the aspect, &c., of the eyes, also, was regarded as favourable. And, as the clearing of the intestines proceeded, and the exhibition of the acid, &c., was continued, a progressive melioration of eyesight was produced. In the evening's report it is mentioned, that he had four alvine motions, the three last of a blackish colour, which most likely was owing to the carbon in the laxative composition.

Ninth Day, (Nov. 23d.) No material alteration. It was still considered advisable to administer those remedies which would tend to keep the belly in a laxative condition. Improvement in the general symptoms (from the particularity of his circumstances) could hardly be expected.

Tenth Day, (Nov. 24th.) The intestinal discharges continued with the blackish coloration. At this time the abdomen is declared to have regained its natural volume. The pulse from 70 to 80; tongue clean: these were favourable symptoms; and very excellent progress, it is extreme-

ly probable, might now have been effectuated by the assistance of suitable alimentary supplies. About this time the purging powders were interdicted, for fear of producing hypercatharsis; which, in his enfeebled condition, would have been extremely hazardous. The lime-juice was rather increased; but cautiously, lest it might induce diarrhœa.

Eleventh Day, (Nov. 25th.) Four copious dejections, since yesterday evening's report, and two this morning. So many alvine motions (and especially as the abdomen was said to have regained its natural volume) indicated the presence of diarrhœa. On the 24th the quantity of Succus Citri was increased. This was suggested from the continuance, or perhaps augmentation, of the scorbutic disposition.

Twelfth Day, (Nov. 26th.) Some looseness; which was previously anticipated. The pupillæ, however, now assumed a more healthful appearance. The tunica adnata, both of the eyeballs and of the palpebræ, retained their suffused, clouded, and slightly inflamed, or perhaps rather congested, appearance. The slight anodyne dose, ordered in the evening, was too small to have a distinct effect; but it was deemed advisable to be cautious, in his weakened condition, and watch the consequences.

Thirteenth Day, (Nov. 27th.) This day's re-

port announces some liquid yellow stools; but it is remembered that he had no tormina nor tenesmus. The scorbutic symptoms continuing to prevail, the acid was increased. In the evening, the diarrhœa continuing, the draught, mentioned in the report, was prescribed.

Fourteenth Day, (Nov. 28th.) The abscess, which collected very rapidly, on the outside of the knee, presented an unpromising appearance; and, judging from the circumstances, it appeared to threaten the membrana capsularis, &c. A considerable quantity of matter being gathered, a small aperture was made at a more depending spot than that in which the opening had naturally occurred. The cinchona, &c. &c. were prescribed; as from experience they were concluded to be serviceable, and with the view of restraining looseness.

Fifteenth Day, (Nov. 29th.) The diarrhœa recurring was considered as unfortunate, especially in his state of debilitation. The moderating or suppressing the tendency to looseness was therefore an object on this day, requiring and receiving the chief share of attention; yet, even now, some of the phænomena of his complaints manifested some amendment, but the state of his vision, and that of the abscess, &c., more particularly. The dryness of the tongue (noted on the preceding evening) is often an unfavourable appear-

ance. It occurs in various conditions and forms of disease; the whole of which cannot here be enumerated. It occurs in cases of extreme debility, attended with fever; in increased discharges whereby the constitution is exhausted; in inflammatory affections of the stomach, of the intestines, &c. &c. Sometimes the Author has observed it as a symptom of teretes, lodging or nestling in the stomach, &c. And therefore the practitioner must discriminate these different conditions, as the remedial ministration should be conducted accordingly. The abscess presented a better appearance than might be expected in the reduced and impaired state of his constitution. The recurrence of the looseness aggravated his exhaustion. The moisture upon the tongue was again a favourable symptom. Notwithstanding the unpromising symptoms (aggregately considered) the eyesight was gradually improving.

Sixteenth Day, (Nov. 30th.) The diarrhoea continued obstinate, although the medicines were given in pretty free doses for restraining it. The abscess had this morning assumed a more favourable appearance; the discharge was somewhat improved, and the inflammation of the integuments subsiding. The brownness and dryness of the tongue were again, in his state, forbidding symptoms; as being indicative of, and complicated with, very extensive exhaustion, &c. On this

day, compresses, roller, &c. were applied to the knee; from which he obtained comfort and support. The lime-juice was now omitted, on the supposition that it might disturb the intestines and continue the looseness.

Seventeenth Day, (Dec. 1st.) The frequency of the pulse, last evening, was another positively dangerous symptom; to which, the dryness of the tongue, &c. and the continuance of the looseness, may be superadded. The suitable occasion had escaped; he was now, through deficiency of agreeable nutriment, reduced to such an extreme degree of weakness and exhaustion, that his death warrant might be considered as confirmed.

Eighteenth Day, (Dec. 2d.) We had now, after a miserable and protracted passage, arrived in China, and received some Chinese beef, &c. but too late to restore those, whose destinies, through the destroying operation of antecedent concomitants, were irreversibly determined. It is needless to enlarge this account after what has been given in the daily reports. In conclusion upon this case, it is probable that some congestion in the encephalon subsisted. For a considerable part of the outward passage he was employed as a maintopman; in which occupation he was frequently and extensively (and often carelessly) exposed to insolation. The countenance retained the peculiar impression originating from this kind of ex-

posure. A request was presented for obtaining permission to examine the body, but this was coarsely refused. An investigation of the encephalon was particularly intended.

The foregoing was a case of hemerailopia, with complication; and given as one, perhaps in all its circumstances, the most troublesome which has come under the reporter's observation. He had delayed rather long in applying for medical assistance; and the inconveniences of accompanying circumstances were especially and powerfully conducive to the aggravation of his misfortunes, and the impossibility of improvement.

CASE SECOND.

November 20th, 1810.

J. H. ætatis 20, has been affected with nocturnal blindness for some time. Eyes of a languid, suffused, and stupid aspect; and pupils contract very slowly even in daylight; they are more dilated than natural; the processus ciliares are of a hazel colour. Some purplish maculæ across the forehead; especially at the roots of the hair. Gums pallid and collapsed, but not particularly tender, nor bleed readily on pressure. Some of the leaden coloured maculæ on the legs; with one or two places, especially on the right

shin, a little below the tuber tibiæ, slightly inflamed and tender. Bowels, from his own account, irregular; taste sometimes sour. Capiat

Sulphatis Magnesiæ unciam.

Carbonatis ----- grana triginta. Sago.

A bottle of spruce beer daily, lime-juice being almost ended.

Vespere. Several stools, with some masses in them; says his taste continues sourish.

R. Carbonatis Magnesiæ drachmam.

Pulveris Rhei Palmati grana quinque.

Olei Menthæ Piperitæ guttas duas, &c. forma haustûs sumenda.

21st. Belly open. Pupils appear inactive; even when exposed in a good light. No other change.

R. Carbonatis Sodæ scrupulum. Capt. solutione, moxque Sumat Acidi Sulph. guttas decem, ex aquæ unciis quatuor. Spruce to be continued.

22d. Eyes suffused, with a dullish obscure rubescence of the teguments surrounding them. Mentioned, at his admission, some pain in the temples, &c.; but says, this morning, that it is not present. Utrique tempori prius abraso quam imponatur Emplastrum Cantharidum quinque pollices quoquoersum habens.

R. Acidi Nitrici guttas triginta.

Aquæ libram, Sacchari semiunciam. Consumat in die. Spruce beer, &c.

23d. Blisters have operated, and are now discharging. Pupillæ contract, &c. more readily. Two stools, &c. Applicetur temporibus Unguen resinosum. Habeat et alia.

24th. Three stools in the night; T. rather foul; says he sees better; blisters discharge. Capiat Pulveris Ipecacuanhæ scrupulum.

Tartratis Antimonii grana duo.

Omittatur Mistura Acidi Nitrici. Utatur Succici Citri Medicæ uncia, in die.

25th. Some œdematous swelling in the palpebræ of the left eye; says he can see longer at night; belly freely open; taste bitter. Capiat Calomelanos grana duo. Repetatur Succus.

26th. Pupils contract, &c., pretty readily; puffy swelling of the left eye almost gone; blisters discharge some; B. freely open. Continuentur.

27th. Blisters on the temples almost dried; The ringlet mentioned in the history of his case continues around the eyes; no headache; T. slightly foul. Nuchæ vespere Applicetur Emplastrum Cantharidum juxta occiput. Sumat Submuriatis Hydrargyri granum illico. Repetatur Succus.

28th. Blister has operated largely: B. freely open; and he at present sees pretty clearly. Continuentur.

29th. Visual faculty improves; blister on the nape of the neck discharging freely; those on the temples almost dried; tongue rather whitish;

the peculiar appearance about the orbiculares palpebrarum subsiding; the purplish spots on the forehead fading, and also some scattered ones on the inferior extremities; a small phlegmon, on the inferior part of the tuber tibiæ of the left leg, discharging pus, with a little blood. Habeat Succu Citri Medicæ uncias tres in potu consumendas. Capiat Camphoræ grana octo horâ decubitûs.

30th. Some matter betwixt the eyelids, in the evenings; T. whitish, and appetite indifferent; vision now good in the daytime. Capiat statim.

Pulveris Ipecacuanhæ scrupulum.

Antimonii Tartratis grana duo. Posteaque Mistura Acidi ut antea utenda, et Camphora h. d.

Vespere. Emetic wrought freely; matter ejected, mingled with bile; one stool.

December 1st. Tongue clean; pulse rather feeble; some bluish blotches on the extremities continue; bile on the left tibia discharges. Continuatur Succus.

Vespere. Nocturnal imperfection of vision, in some degree. Capiat Submuriatis Hydrargyri grana duo.

2d. Can behold minute objects in daylight, and can distinguish common figures, in writing, with candlelight. He is now considerably emaciated; a little matter observed at the nasal angles of the eyes; no pain or uneasiness through the forehead;

blister on neck dry; appetite middling. Continuatur Succus.

3d. Debility appears to be the principal complaint.

℞. Acidi Nitrici semidrachmam.

Aquæ uncias sexdecim, Sacchari semiunciam;
quatuor vicibus sumenda.

4th. Visual power restored, and regains general strength and health. Repetatur Mistura acida.

5th. Nearly as yesterday. Continuatur.

From this date, to the 14th, when it is reported, "Affection of head and eyes removed," nothing worthy of narration intervened: but after this he suffered various derangements of the bowels, &c.; at last terminating in dysentery. After getting into harbour he was very irregular, and injured himself much by the indiscreet use of the native spirits of the country; a liquor, seemingly, of the most baneful tendency. As the nocturnal blindness was the affection for which he was ostensibly admitted into the sick list, and as this was removed completely against the 14th December, the remainder of the case, as being irrelevant, is not here introduced.

CASE THIRD.

April 27th, 1814.

M. H. ætatis 22, Swede, his general aspect presents a degree of stupidity, languor and inactivity, &c.; eyes dull and heavy, and the pupils wider than natural, and he has repeatedly said that he cannot see at night; there is a bluish vesicle, of the size of a small hazel nut, at the lower part of the left ala nasi, but chiefly seated on the cheek; this is now burst; several small vesicles containing a bluish coloured fluid are placed below, and a little beyond the left processus zygomaticus; tongue, yesterday, was dryish along the middle; this morning it is of a greyish colour, and taste bitter; pulse of ordinary frequency, but feeble; mentions pain of both temples shooting through the eyes; the pupils contract imperfectly and slowly; he says that he sees indifferently in daylight; breath fœtid; his gait is languid; the eyes are of a bluish grey colour. Yesterday he received

Submuriatis Hydrargyri grana tria.

Succi Citri Medicæ unciam, &c.

He has had two stools, which are said to be palish.

℞. Tartratis Antimonii grana tria.

Aquæ uncias quinque M.

Capiat cochlearia magna duo omni horæ quadrante, usque ad vomitionem.

℞. Succī Citri unciam, Vini Rubri unciam.

Aquæ uncias viginti, Sacchari semunciam;
in die pro potu commune utenda.

℞. Submuriatis Hydrargyri grana quinque.

Pulveris Rhei grana quinque h. s. s.

28th. Vomited some matter, mingled with bile, after the second dose; one stool; tongue feels hardish under the finger, somewhat of the consistence of the crust of wheaten bread, containing a very little moisture; pain, in the temples and across the forehead, continues; visage rather brisker; P. a little above 70; the vesicular eruption rather declining; a small vesicle under the left angle of the mouth. Sumat Massæ Pilularum Cambogiæ Aloës et Submuriatis Hydrargyri (utriusque grana duo vel partibus æqualibus) grana decem. Repetatur Succus, &c.

℞. Pulveris Rhei grana quinque.

Submuriatis Hydrargyri grana quinque forma pilulæ h. s. Utrique tempore Applicetur Emplastrum Cantharidum vespere.

℞. Subsulphatis Hydrargyri flavi grana quinque.

Pulveris Zingiberis Radicis grana quinque.

----- Amyli scrupulum; intime misceantur; in chartulas quinque distribuenda. Naribus inhaletur una omni mane.

29th. Blisters applied to the temples have operated moderately; T. slightly gray, and still hardish; He has had an accession of coldness this morning, at seven, which, by account, lasted for an hour and half; P. small; some unnatural warmth on the trunk of the body; about five stools, said to be palish; some pain in the seat of the hepar, this appears to be excited by pressure; the pupils appear narrower and contract more readily. *Repetatur Pulvis Sternutatorius.*

℞. *Magnesiæ Sulphatis* semiunciam.

Olei Corticis Citri Aurantii guttas octo.

Citri Medicæ fructûs Succi semunciam, &c.
statim sumenda.

℞. *Oxydi Hydrargyri cinerei* grana decem.

Pulveris Antimonialis grana quinque.

Opii granum h. s. s.

Temporibus applicentur Unguinis Resinosi p. v.
Emplastri Cantharidum p. 1. *Habeat Succi Citri Medicæ* unciam in potu commune utendam.

30th. This morning he feels better; P. moderate; T. cleaner; one stool, in the night, but quality unknown; pain of head lessened; eyes look clearer, and also the visage; visual faculty amending. *Repetantur Remedia omnia ut herè.*

May 1st. Several stools last night; T. as before; blisters on temples not running, being almost wholly healed; eyesight much improved, so that he sees minute objects with daylight; he has

had no return of chillness. Sumat illico.

Infusi Cassiæ Sennæ uncias duas.

Potassæ Supertartratis unciam.

Aquæ communis uncias tres.

Continuentur alia.

2d. By account he has had about six or seven stools; T. pretty clean, and more of natural feel under the finger; visage still fresher; the vesicles are gone, only a little crusty matter, or the shrunk cuticle, remaining in their place; a recurrence of the chillness yesterday, a little before nine, which lasted about an hour and a half, succeeded by increased warmth, &c.; some uneasiness of epigastrium; eyes of natural appearance; temples healed.

Capiat Cinchon. Lancifoliæ semidrachmam quater in die. Continuentur alia medicamina.

3d. Was sick this morning, and vomited about two; T. dryish, but pretty clean; temples have again been made raw with the irritating ointment; P. rather languid, but about natural frequency. Repetantur Oxydum, &c. et Pulvis Antimonialis sine opio. Hodie Sumat dosin Cinchonæ ter tantum. Habeat etiam Vini rubri uncias duas. Sumat statim

Supertartratis Potassæ semiunciam.

Pulveris Convolvuli Jalapæ grana decem.

Olei Corticis fructûs Aurantii guttas quinque.

4th. He appears languid and listless; no stool;

temples raw ; no pain; P. about 80, rather feeble ,
 T. pretty clean, but hardish ; no return of chill-
 ness. Capiat statim Massæ Pil. Gamb. Aloes et
 Submur. grana decem. Meridie et grana quinque.
 Repetatur Cinchona quater in die. Continuentur
 alia.

5th. Appears torpid and silly ; they have
 washed him, this morning, in cool water (without
 advice), since which he has had slight chillness ;
 two greenish stools last night ; tongue dry, and
 taste bitter ; P. about natural frequency. Sumat

Sulphatis Zinci grana viginti.

Vini Ipecacuanhæ drachmas duas.

Omittatur Mistura Cinchonæ. Repetantur alia
 ut hesterno die.

6th. Appears a little better this morning ; T.
 dry ; two small stools, one seen this morning, of a
 bottle-green colour ; in the last few days he has de-
 clined considerably ; P. weak, but about ordinary
 frequency ; Some pain of forehead, but this morn-
 ingless ; the medicine induced pretty free vomiting.

℞. Potassæ Carbonatis scrupulum, Aquæ un-
 cias quatuor, statim bibenda, protinus que
 bibat, Succu Citri drachmas tres Aquæ un-
 cias duas. Augeatur Vinum ad uncias
 quatuor. Repetatur vespere. Temporibus
 applicentur Emplastra Cantharidum am-
 pliora.

7th. Several small stools, which, as far as can

be judged, have the aforementioned appearance; the blisters have induced irritation, and some vesication; upon inquiry, he says, he has no headache this morning; there is always some knitting of the brow betwixt the two corrugatores superciliarum; refers to a pain at the caput cœcum coli; he appears torpid and languid; some matter forms in the eyes, and oozes out at the angles; P. as before; slept a little; eats little or nothing; a peculiar odour has for some days issued from the body; this partakes of what has been called an earthy odour.

R. *Misturæ Camphoræ unciâs octo.*

Spiritus Ætheris Nitrosi semidrachmam.

Subcarbonatis Magnesiæ drachmam.

Olei Corticis Aurantii guttas decem.

Confectionis Aromaticæ grana decem.

Sacchari drachmas tres, Misceantur.

Capiat unciâs duas ter in die. Augeatur Vinum ad unciâs quinque. Temporibus applicetur Unguen Resinosum.

8th. Tongue, since yesterday, dryish, with some white streaks upon it; a few stools, what have been seen, of a brownish green colour, and fœtid; P. small; his interpreter mentions that he complains of difficulty in swallowing solids; temples scarcely discharging; urine said to be properly voided. *Temporibus applicentur*

Unguinis Resinosi partes quinque.

Emplastri Lyttæ pars una.

Capiat Misturæ uncias duas secunda hora, die durante. Sumat hora somni.

Submuriatis Hydrargyri grana decem.

Extracti Hyosciami grana duo.

Camphoræ grana decem. Habeat Vini uncias sex et Succi Citri unciam; in decoctu Hordei illis utendum.

9th. Pulse feeble, and he seems weak and fading; eyes hollow, the pupils, however, contract, &c., readily, according to the quantity of light; several efforts at stool, but little passed, but no pain; T. smooth, the cuticle of it having a shining appearance; gums are ruddy. Repeatur Mistura ut here. Omittatur bolus. Resumat vinum, &c.

10th. Complains of the pain of his gums; T. softer, cleaner and moister; two stools; P. rather better; temples and cheeks now crusted with the gradual oozing from the blisters. Abluantur tempora, dein applicetur Ceratum Calaminæ. Repeatur Mistura. Augeatur Vinum ad uncias octo. Succus, &c.

11th. In the course of the night he has been seized with looseness, and is said to have had about eleven motions; the last which has been seen is of a greenish orange colour; he refers to pain in the epigastrium, and in the hypogastrium; P. small, and irritated; T. pretty clean, and moist.

Sumat statim Pulveris Carbonatis Calcis compositi grana triginta, Mucil. Gum. Acac. Arabicæ drachmas duas Aquæ Cinnamomi uncias tres,

Tincturæ Opii guttas decem.

℞. Farinæ Tritici uncias quatuor.

Aquæ uncias viginti coquantur modo solito, dein addantur Vini rubri uncia octo.

Sacchari semiuncia.

Pulveris Cinnamomi compositi grana decem.

Sumat uncias quatuor omni hora.

Hora nona, A. M. The draught has removed his uneasiness; the P. less frequent, and about 75, and rather stronger; T. dry and smooth. Repetatur Mistura Camphoræ. Omittatur Succus Citri. Repetatur haustus hora somni.

Vespere. Two stools since the morning's report, and he has been easy; P., at seven P. M., 84, and fuller and firmer; he has a hollow raucous cough; his voice has been hollow and squeaking for some days; T. dryish, &c. Continuentur, ut ordinatum fuerit.

12th. Had a quiet night, and only once out of his hammock to void urine; he is easy; P. about 90, regular and moderate; T. dry; the upper part of the temples raw; swallowing is somewhat difficult; eyes pretty lively; he speaks in a hollow and croaking tone. Repetantur ut herè.

13th. A good night; P., this morning, 84; T.

moist; no pain; no stool in the night, but voided urine twice. *Temporibus applicentur.*

Unguinis Resinæ partes septem.

Emplastri Lyttæ pars una.

Continuentur Medicamina, sed Decoctui addatur Succi Citri Medicæ fructûs semiuncia.

Vespere. His attendant and interpreter mentions that he seemed to make two attempts to empty the rectum, but he only passed urine; P. 88, and smaller than in the morning, but he is easy and tolerably smart. *Repetantur Medicamina.*

14th. A small stool last night, and two this morning, they are very small in quantity, and green in colour, with some softish massulæ; P., this morning, betwixt five and six, 75, and small; he rested pretty well in the night; T. cleaner, and moist. *Capiat statim,*

Magnesiæ Subcarbonatis scrupulum.

Pulveris Jalapæ grana octo.

Olei Corticis Aurantii guttas quinque.

Repetantur Remedia et haustus vespere cum Tincturæ opii guttis quindecim.

15th. Two or three small stools, chiefly in last night; complains of the pain of his gums; temples nearly healed; P. about the formerly specified frequency; T. clean, and seemingly larger than natural, and covered with plenty of saliva, but no spitting; no headache, &c. This morning,

early, the skin was rather dry, and the T. also dryish. Continuentur Mistura Camphoræ et Vinum. Capiat illico,

Olei Ricini semiunciam.

Mucil. Acaciæ Arabiæ gummi drachmas tres.

Olei Corticis Aurantii guttas sex.

Sacchari drachmas duas.

Aquæ uncias duas; intimè misceantur terendo, protinusque bibenda. Repetatur haust. h. d.

Vespere. P. nearly 100, and rather small; one stool, with some massulæ floating on the surface of urine, &c.; T. inclined to dryness. Sumat cras mane, olei Ricini unciam.

16th. A good night; about two small stools; T. clean, but unnaturally smooth; temples again discharging; voids urine freely; continues to complain of his gingivæ. Continuentur Remedia.

17th. A good night, and no stool; passed urine twice; T. clean, but dry and smooth; P. from 80 to 90, and rather small; visage clear and the eyes lively; he refers to the uneasiness produced by the epispasties; in the course of the last twenty-four hours, four small liquid greenish coloured stools. Temporibus applicetur Ceratum Calaminæ. Continuetur mistura; et haustus, cui addantur Confectionis Aromaticæ grana decem.

18th. Had an easy night, and one stool, but since six o'clock he has complained of a pain at the extremity of the ensiform cartilage; T. clean, and moist; breathing somewhat anxious; P. small, and from 90 to 100; in other respects as formerly.

℞. Subcarbonatis Magnesiæ scrupulum.

Aquæ Ammoniac Carbonatis guttas decem.

Tincturæ opii guttas decem.

----- Rhei Compositæ scrupulos duos.

Aquæ uncias tres, misceantur, illico sumenda. Repetantur alia ut hactenus.

Vespere. The draught quieted the uneasiness, but since the afternoon it has returned, and, by his own reference, seems to extend below the sternum; T. clean, and moist; one stool; P. nearly 100, and small; surface dryish. Fricetur pectus Tinctura Saponis, si que aurora urgeat dolor, imponatur Emplastrum Lyttæ. Sumat statim Subcarbonatis Magnesiæ semidrachmam Tinctura Camphoræ Compositæ drachmam.

19th. Had comparatively an easy night, the pain having ceased; he slept some; no stool, but has voided urine; P. about 120, and small, and scarcely regular, either in strength or repetition; a little cough, occasionally; when the hand is put upon the side, a kind of sliding motion is felt as if from the motion of the lungs subjacent; features rather more collapsed; eyes hollow, with a little

matter at the angles; swallows with tolerable readiness; T. moist and nearly clean; upon strict inquiry at his interpreter, he is said to have occasional shooting uneasiness about the attachments of the diaphragm; since yesterday's evening there has been an increased and unnatural degree of warmth diffused over the trunk of his body, and superior extremities, while the thighs and parts below are of their former temperature.

℞. *Misturæ Camphoræ unciās octo.*

Vini Ipecacuanhæ drachmam unam cum semisse.

Tincturæ Digitalis purpureæ guttas quindecim.

Tincturæ Opii guttas decem.

Mucilag. Acaciæ g. Arabicæ unciās duas.

Sacchari semiunciam, Misceantur.

Dentur unciæ duæ secunda hora, die transeunte. Continuentur alia. Pectori, Epigastrio et superiori, Applicetur Emplastrum Cantharidum.

Vespere. Blister operating; one small stool; T. dryish; no pain; thinks he respire more freely; has taken his wine and decoction freely; P. about 120, and rather more distinct than in the morning. Repetatur haustus ut octavo decimo. Maneatque ad Auroram Emplastrum.

20th. A quiet night; no stool, but voided urine; P. small, and about 126; superficial temperature more uniform; respiration more equably

performed; no cough heard this morning; T. dry; pupils, since yesterday, narrower than formerly; took his decoction and wine pretty freely; several small papulæ (or perhaps rather they may come under the head *Purpura*, as restricted by Willan, &c.) diffused over the arms and body, &c. swallowing would appear to be rather improved. *Repetatur Mistura. Augeatur vinum ad uncias decem in decoctu antemeridiano, uncias que totidem postmeridiano. Priorique illarum addatur Succi Citri uncia. Pectori, &c. Applicetur Unguen Resinosum.*

Vespere. P. this evening about 120, and better than in the morning; T. continues dryish; no stool; has been easy; blister oozing a little, but very slightly inflamed, &c. &c.

B. Tincturæ Camphoræ Compositæ drachmam.

----- Digitalis purpureæ guttas viginti.

Confectionis Aromaticæ grana decem.

Spiritûs Ætheris Nitrosi drachmam.

Aquæ uncias tres cum semisse.

Sacchari drachmas duas h. nona. s.

21st. Gradual declension in the night with the labouring and anxious respiration, and is now moribund.

22d. Died yesterday, nine A. M.

The above case is given as an example of hemerailopia, complicated with general disease of the constitution. Considerable information might

have been obtained by opening the body, but this, owing to the inconvenience of circumstances, was not performed. As the whole case is important, involving in its course a number of changes and fluctuating phænomena, it was deemed advisable to give the whole history, both as exemplifying the nocturnal blindness, the removal of this, notwithstanding that the disease of the constitution remained unsubdued, and at last the fatal conclusion amidst an accumulation of unfavourable circumstances. He had been exposed, between four and five months, to those causes which might be considered productive of his complaint.

CASE FOURTH.

May 10th, 1814.

Frederick Holst, ætatis 24, Dane, applied yesterday, saying that his visual faculty becomes imperfect after sunset. He is a tall stout man, with darkish eyes; T. of the appearance of half boiled tripe, but not coated; P. moderate; little headache, only some shooting and flashing of the eyes; on the legs and thighs some bluish stigmata of the size of flea bites, but somewhat elevated and firmish under the finger. These symptoms,

by his own account, have lasted a week; gums not spongy. He was ordered

Tartratis Antimonii grana tria, finitôque opere. Sumat

Sodæ Sulphatis unciam.

Succi Citri Medicæ semiunciam, &c.

The Tartrate produced copious vomiting of matter of various colours, and he has had four stools. Sumat Carbonatis Sodæ semidrachmam solutione, bibat que protinùs, Succi Citri drachmas tres. Habeat Succi Citri unciam, quotidie potu commune utendam.

11th. Tongue as formerly; two stools, but quality unknown; he complains of weakness; no uneasiness any where in the abdomen; P. small, and slow.

Habeat Succi Citri unciam.

Vini Rubri uncias duas, Aquæ libras duas.

Sacchari unciam in die bibenda.

12th. Two hardish stools; in other respects no change. Repetantur ut herè.

Præterea, Sumat Massæ Pilularum Gambogiæ Aloes et Submuriatis Hydrargyri, (utriusque partes æquales,) grana decem, etiamque.

Sulphatis Sodæ unciam, Succi Citri drachmas tres, &c.

13th. About seven alvine dejections; T. assuming more of its natural properties. Repetantur

Succus et Vinum, &c. Sumat h. s. Massæ pilularum Hydrargyri grana decem.

14th. Two yellowish stools; the papulæ on the limbs remain; he is recovering appetite. Augatur Succus ad unciam et semi. Repetantur Pilulæ vespere.

15th. Three stools; visage clearer, and he expresses himself to be better; maculæ on limbs rather declining; appetite continues improving, &c. Repetantur Remedia ut herè.

16th. Three stools; T. whitish, but not loaded; eyesight in the night, by his account, unchanged. Inhalet per nares alcohol Ammoniaci vaporem. Habeat Succu Citri Medicæ unciam unam cum semisse, &c. Sumat h. d.

Camphoræ grana decem.

Pulveris Antimonialis grana quatuor.

17th. Continues improving; two stools. Repetantur.

18th. He continues to say that he cannot see properly in the night; the eyes, however, possess their natural appearance, and the pupils contract, &c. with daylight; three stools; T. pretty natural. Continuentur Remedia.

19th. His general health is amended; says his vision is unchanged. Repetantur Succus, &c. Omittantur pilulæ. Sumatque statim, Sodæ Sulphatis unciam et Pilulas ut duodecimô.

20th. Six or seven stools; papillæ of tongue

whitish; gums firm, but palish. Omittatur vapor Ammoniaë. Repetantur Succus et Vinum. Sumat h. s. Oxydi Hydrargyri cinerei grana quatuor, Pulveris Zingiberis Radicis grana quinque Boli sub forma.

21st. On this day the ship arrived in the harbour of Bombay, when the use of medicine was suspended; and on the 30th it is reported, that, "Since the arrival of the ship in harbour, the use of medicine has been suspended, and he is now recovered from his ailment." The utility of the change of diet was happily realized in this case. From the general nature of this instance no dangerous complication was observable; and as soon as the assistance of fresh sound aliment was obtained, the medicines were withdrawn, and the work committed to kind nature; and in a few days his restoration was complete.

On the 25th of September the same man again applied with hemerailopia, after being only eight or ten weeks exposed to the circumstances which might be judged capable of causing such an affection. This may be shortly given, as an example of the same complaint recurring in the same individual, but perhaps modified with slight varieties.

There is irregularly diffused, over the legs, and more thinly upon the thighs, and also upon the forearms, a purplish eruption of different sizes,

from the smallest points, to the extent of a small finger nail; he mentions pain at the internal orbital processes of the frontal bone; T. whitish, and also the lips; aspect dull, and stupid; he states the existence of hemerailopia; bowels said to be regular. These symptoms, by his own account, of some standing. Capiat statim,

Infusi Cassiæ Sennæ uncias tres.

Sulphatis Sodæ unciam.

Habeat Succii Citri unciam, in die.

26th. Appears fresher; T. cleaner, but not of natural appearance, possessing somewhat of the show of boiled tripe; two free alvine motions; he refers to the pain in the brow; P. apparently of ordinary frequency, but feebler; gums, yesterday morning, palish, and, at a point or two, bled rather easily upon gentle pressure; this morning they are ruddy. Repetatur Succus.

R. Oxydi Hydrargyri cinerei grana octo.

Camphoræ, grana decem.

Oxydi Antimonii cum Phosphate Calcis, grana quatuor, forma Pilularum trium h. s. sumenda. Aspergatur que quater in die caput aqua marina.

27th. Makes complaint of nothing but the pain of the forehead; T. clean, which appears naturally larger than common; two stools; spots upon the limbs seemingly uncharged. Augeatur

Succus ad unciam et semissem Repetantur Pilulæ tres h. s. Capitisque affusio.

28th. He continues rather better; two stools; headache relieved. Continuentur Medicamina ut herè.

B. Hydrargyri Subsulphatis flavi grana quinque.

Pulveris Radicis Zingiberis grana decem M. in chartulas quinque seperanda. Inhalet naribus unam, omni mane.

29th. The errhine produced a discharge, both from the eyes and nose; two stools; pain of frontal region almost gone. Repetantur Remedia, sed Augeatur Succus ad uncias duas.

30th. No very material change; pain of brow almost gone, but when he looks upwards, then he says, he feels as if a kerchief were tied over the forehead; maculæ upon the different limbs continue. Capiat Tartratis Antimonii grana tria tribus vicibus, horæ quadrante interposita, dein Repetantur Medicamina.

October 1st. Tartrate operated freely, and produced a large discharge, but he cannot assign any intelligible property to the matter rejected; maculæ fading; vision improving; B. open. Continuentur omnia medicamina præter Pilulas.

2d. He continues amending; pain of head gone, and vision still further improved; vomited in the

afternoon, but little in quantity ; no stool ; pulse good ; visage clearer. Capiat

Subcarbonatis Magnesiæ semidrachmam.

Tincturæ Colombæ drachmam, forma haustûs. Repetantur alia ut herè.

3d. Appears improving ; T. very clean ; one stool ; no pain in the forehead. Repetantur Succus et Pulveres.

4th. Maculæ on limbs remain, with some pimples ; gums florid, and pretty firm ; one stool. Repetantur ut herè.

℞. Permuriatis Hydrargyri granum.

Ammoniaë Muriatis grana viginti.

Aquæ uncias octo, Solvantur, fiat lotio, qua abluantur crura, bis, terve, in die.

5th. Visage clearer, and brisker ; two stools ; T. clean. Repetantur Remedia ut herè.

6th. Visual faculty continues improving ; P. natural ; spots, &c. on limbs remain somewhat elevated, and irregular in their surface ; T. clean, but retains rather an unnatural quality of its cuticle, being somewhat rugose ; two stools ; head now clear ; eyes have all along retained their natural lustre, &c. but his whole countenance presents an uncommon dulness. Capiat Massæ Pilularum Aloës Compositarum grana decem. Repetantur alia ut herè.

7th. About four or five stools ; T. clean ; the papulæ on the limbs rather declining ; several of

them are now in the pustular condition; gums ruddy, and healthy. *Omittatur Succus. Repetantur Pulveres et Lotio.*

8th. Continues amending, and purpuræ, &c. on limbs subsiding; head quite clear, but he still denies that he sees in the natural manner in the night. *Omittantur Pulveres. Repetatur lotio. Capiat Pilularum Aloes et Assæfoetidæ (assæfoetidæ Aloës et Saponis utriusque partes æquales), grana decem ter in die.*

9th. Is much better in all respects. *Repetantur.*

10th. Papulated eruption falling away; several stools; T. clean; vision further improved. *Capiat Pilulas (grana decem) semel in die. Continuetur solutio.*

11th. By his own account, his vision must have regained, nearly or wholly, its natural clearness; yesterday morning, upon trial, he could distinguish very small dots on white paper; B. open; eruption seemingly unchanged. *Repetantur Solutio et Pilulæ. Augeatur Permuriæ Hydrargyri ad granum et semissem.*

12th. Vision may be said to be restored, but the papular eruption continues. *Capiat in die Acidi Nitrici drachmam. Repetatur Lotio.*

14th. Eruption fading. *Repetantur Solutio et Acidum.*

15th. *Sumat Acidi scrupulos quatuor in die.*

18th. The eruption declines very slowly. Omit-
tatur lotio.

℞. Unguinis Simplicis drachmas quatuor.

————— Hydrargyri fortioris drachmas du-
as.

Acidi Nitrici guttas viginti intimè miscean-
tur. Cruribus mane et vespere applican-
dum pauxillum. Omittantur alia.

From this date nothing deserving narration
occurred. As soon as his vision was tolerably
recovered, he was kept at his customary exercise,
(being in reach of fresh provisions,) and with
greater benefit than if he had been allowed to
loiter in idleness. This case shows the peculiar
liability of some individuals to this complaint.
He was a stout man, of at least six feet of altitude,
but seemed of a sluggish disposition.

The following case is subjoined as an instance
of mixed disease, and involving something curi-
ous in its phænomena, but shall be given without
pathological considerations.

May 16th, 1814.

John White, ætatis 29, English, applied on the
13th, specifying some headache; the pain especi-
ally in the forehead, and betwixt the eyes. The
bowels were slow, and the T. rather foul. He
then received—

R

Massæ Pilularum Gambogiæ Aloës et Submuriatis Hydrargyri (utriusque partes æquales) grana decem, et

Sulphatis Magnesiæ semiunciam.

Succi Citri Medicæ eandem.

In potu commune, Habeat Succi semiunciam.

This morning the pupil of the left eye is considerably dilated, and almost motionless, (the right appears natural;) the light disturbs this eye, and the upper palpebra hangs half-way over the eyeball. He had four motions from the physic, and the B. has been regular; T. pretty clean; P. moderate; general strength declined; appetite middling;—no maculæ on the limbs; gums bleed slightly upon pressure. Per nares omni mane transeat Alcohol Ammoniati vapor. Augeatur Succus ad unciam.

℞. Supertartratis Potassæ semiunciam.

Pulveris Convolvuli Jalapæ scrupulum.

Olei Corticis Aurantii guttas sex.

Aquæ uncias quatuor misceantur; statim sumenda.

℞. Camphoræ grana decem.

Oxydi Hydrargyri cinerei grana quinque boli forma, h. s.

17th. He specifies twelve alvine dejections, but qualities unknown; mentions occasional giddiness; complains of weakness. No sharp pain of the head, except the shooting across the frontal

sinuses, and, he now admits, likewise in the temples. T. tolerably clean. Pupil of left eye as yesterday; that of the other natural, and contracts upon the admission of light. The affection of his eyesight, he thinks, of about eight days standing. His eyes are of a brownish colour. Repetatur vapor Alcohol Ammoniaci. Continuentur alia, cum Vini Rubri uncia una et semisse.

18th. Left pupil contracts slightly, and he thinks he sees better, and less uneasiness in the frontal region, and the vertigo likewise moderated; ut herè.

19th. The left pupil contracts gently; uneasiness of forehead removed, but has a sense of heaviness at the sagittal suture; taste sour; T. pretty clean. Capiat

Tartratis Antimonii grana duo.

Pulveris Ipecacuanhæ grana decem, finitâ vomitionê; Repetantur Remedia, ut herè.

20th. Emetic produced free vomiting. This morning his head is clear; processus ciliares of the left eye approach nearer the centre of the pupil; three stools. Repetantur Succus et Vinum. Cervici posteriori vespere applicetur Emplastrum Cantharidum.

℞. Oxydi Hydrargyri cinerei grana decem.

Opii granum unum, h. s. Con. vap. Al. Am.

21st. Blister has operated; two stools. T. pretty clean; pupil approaching its natural condition.

Parti vesicatae applicetur Unguen Resinosum.
Continuentur Remedia.

℞. Subsulphatis Hydrarg. flavi grana quinque.
Pulveris Radicis Zingiberis grana decem.
Simul intimè terantur, fiant Pulveres quinque,
quorum inhaletur unus omni mane.

22d. Blister healed. Says he sneezed, and his nose discharged freely, after using the Pulvis Sternutatorius; and was attended with some uneasiness in the frontal sinuses. Pupil of eye seemingly unchanged. Continuentur.

23d. His general condition appears stationary; two stools. Tempori sinistro vespere applicetur Emplastrum Cantharidum. Continuetur Pulvis Errhinus Sumat et h. d. Camphoræ grana decem Oxyd. Hydr. ciner. grana quinque.

24th. Pupil of eye nearly as before; two stools. T. clean; P. moderate; blister has operated. Tempori adhibeatur Unguen Resinosum. Repetatur vespere; sumat statim Pilul. Gambogiæ Aloës et Submuriatis Hydrargyri grana decem. Meridie et Supertartratis Potassæ semiunciam.

Olei Juniperi Communis guttas decem.

Tincturæ Digitalis guttas triginta f. h.

25th. Some epistaxis yesterday, and also this morning, since which he thinks his head clearer. T. clean and moist; P. natural; gingivæ prominent and painful,—this he first observed last evening. The processus ciliares of the left eye possess

more mobility ; two stools. *Tempori applicentur Unguinis Resinosi partes quinque; Emplastri Lyttarum partes duæ. Repetantur alia Remedia ut herè.*

26th. Two alvine motions, which he states to be somewhat reddish ; temple discharging gently. A little epistaxis. No uneasiness at the encephalon. Tongue clean ; pulse temperate.

℞. *Misturæ Camphoræ uncias octo.*

Tincturæ Digitalis purpureæ guttas quinquaginta.

Olei Juniperi Communis guttas decem.

Sacchari drachmas duas misceantur.

Sumat unciam unam et semissem tertia hora. Sumat omni mane massæ Pilular. Gamb. Aloës et Submur. Hydr. grana quinque.

27th. Continues improving ; part of the blister on the nape of the neck raw and painful ; three stools. *Repetantur ut herè.*

28th. No return of epistaxis ; no headache. P. small, and about ordinary frequency. *Repetantur Remedia ut herè.*

29th. No evident ailment, but the state of the pupil, and the imperfect elevation of the palpebra, superior. *Continuentur medicamina.*

30th. Says that the snuffing of the powder produced some pain. Considerable discharge from the nostrils ; T. clean and moist ; three stools. *Continuentur medicamina.*

31st. Mobility of pupil rather increased; distant objects generally (when he employs both eyes) appear double. The left eye is still unduly influenced by light. *Repetantur omnia ut herè.*

June 1st. Irritability of eye lessened, and its pupil approaches to the wideness of the other; three stools; temple discharging. Powders irritate the nostrils, and a few drops of blood from the left, and a discharge of lachrymæ from the left eye. *Omittatur Mistura.*

℞. Pulveris Cinchonæ unciam.

Mucil. Acaciæ Arabicæ Gummi uncias duas.

Olei Corticis Aurantii guttas viginti.

Sacchari semiunciam, Aquæ uncias viginti. *M. Capiat uncias duas quater in die. Repetantur alia.*

2d. Visual faculty improving; pulse small, and about natural frequency; temple continues discharging. Blister on the nape of the neck is healed; two stools. *Repetantur Remedia.*

3d. Not much change; three stools; visage clear. *Oculo instillentur Vini Nicotianæ guttæ quinque omni mane. Repetantur alia.*

4th. The contraction and dilatation of both pupils appear synchronous and relatively proportionate; but the incapacity of the levator palpebræ superioris continues. Two stools; temple discharging moderately; pulse moderate; appetite good; no headache, or any unusual feeling. *Continuentur Remedia omnia ut herè.*

5th. Ocular ailment amending. *Tempori applicetur Ceratum Calaminæ. Repetantur alia medicamina.*

6th. Continues amending; three stools; tongue clean; pulse moderate. General health seemingly good. Sometimes a few drops of blood from the nose. *Sumat Misturam quinquies in die. Repetantur alia.*

7th. Tongue slightly covered. He appears not to have regained full power over the *palpebræ superioris levator*. *Repetatur mistura, &c. Oculo insillentur Tincturæ Cinchonæ compositæ guttæ sex vel septem. Fricetur supercilium sinistrum mane et vespere Oleo Camphorato.*

8th. The appearance of the eyes has now regained a similarity; temple nearly healed. *Omittatur mistura Cinchonæ. Sumat,*

Tartratis Antimonii grana tria; dein mistura utatur, ut antea. Repetantur Pulveres Sternutatorii et Oleum.

9th. Emetic operated freely, and a quantity of bilious matter rejected; and he says his vision is clearer. *Sumat Massæ Pilularum Aloës et Assæfoetidæ scrupulum omni mane. Repetantur alia.*

10th. A little unnatural sensibility in the left eye, upon the admission of brisk light, continues; three stools. *Continuentur medicamina omnia ut herè. Oculo sinistro instillentur Spiritûs Camphoræ guttas sex.*

11th. Has more command over the levator palpebræ superioris, and says he can see distinctly ; four stools. *Repetantur Remedia.*

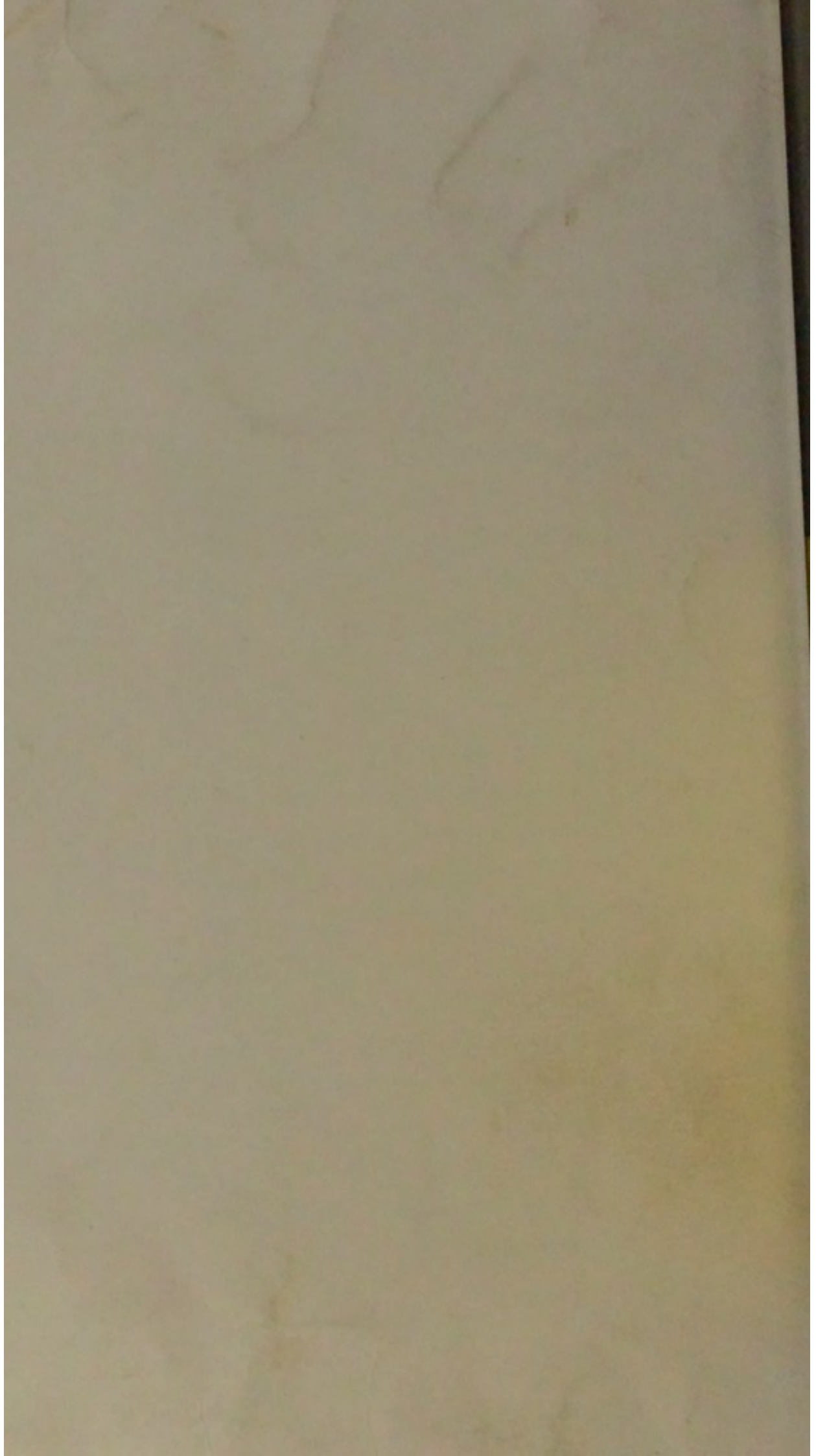
13th. He seems to have a little cast in either eye, especially when he directs them suddenly to distant objects ; but he may be said to be relieved from the ocular complaint, for which he applied. The double vision, &c. have ceased. *Continuentur Remedia.*

14th. Scarcely any complaint. *Continuentur omnia.*

15th. Ocular ailment seemingly removed. *Omittantur medicamina omnia præter pilulas, quas Sumat per aliquod tempus.*

The Author has taken the liberty to narrate the foregoing Cases, not with the view of swelling his pamphlet, but more especially in the way of description and illustration, and as complete evidence also of the occasional difficulties, and even dangerous state of constitution, with which Hemerailopia may be frequently complicated ; and further, that the practitioner should generally, in these cases, have special regard to the systematic deviation from the standard of health, and thus the symptomatic phænomena will ordinarily be the more conveniently conquerable.

FINIS.



RIGHT
GUTTERS.

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