

Remarks on the ophthalmy, psorophthalmy, and purulent eye. With methods of cure. Considerably different from those commonly used, and cases annexed, in proof of their utility / by James Ware.

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W I T H

METHODS of CURE, considerably different
from those commonly used; and CASES
annexed, in Proof of their Utility.

By JAMES WARE, SURGEON.

Oculorum affectus tam varii sunt atque multiplices, ut
difficillimum sit, eos perspicuè ac dilucidè enarrare, ab
invicemque distinguere.

RIVERIUS,

L O N D O N :

Printed for CHARLES DILLY, in the Poultry.

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P R E F A C E.

THE Author of the following sheets, for some years, has been connected, in the practice of his profession, with Mr. Wathen; to whom he is intirely indebted for whatever may be thought an improvement, in those branches of surgery which are here considered: and it is with the full consent and approbation of that gentleman, that these remarks are submitted to the judgment of the public.

The majority of the cases came under the Author's own inspection

tion, and were committed chiefly to his management ; as will appear by the form of the narrative. With them might have been united a very considerable number of others ; but those, which are inserted, were thought, by Mr. Wathen, to be fully sufficient.

After all that can be said, or written on the subject ; so great is the variety in the appearance of those disorders, and the symptoms attending them, that ample scope will still be left for exercising the judgment, with regard to the necessary variations in applying the remedies proposed : though it is hoped, this also will be rendered

P R E F A C E. vii

dered less difficult, by what will
be found in the descriptions given
of the different nature and treat-
ment of the cases annexed.

Walbrook,
Feb. 2, 1780.

R E-

E R R A T A.

- Page 10. l. 16. *for* becomes, *read* become
28. 1. *dele* and greater
108. 5. *for* inverted, *read* everted
110. 24. *for* Sniderian, *read* Schniderian
111. 7. *for* mucous, *read* mucus

REMARKS, &c.

INTRODUCTION.

AMONG the various disorders to which the human body is liable, inflammation seems to be one of the most considerable; as is apparent from observing the immediate and direct influence which it has, in preventing or obstructing the necessary action of the parts affected by it: and in no case is this more evident than in the Ophthalmy, or Inflammation of the eyes; which, in every degree of it, is found, in some measure, to impair the sight; and, in not a few instances, has risen to such a height, as entirely to destroy it.

My design in the following pages is—first, to lay before the reader some observations on this complaint—then to treat

of a disorder, which more directly affects the eye-lids, and which I have distinguished by the name of the Pforophthalmy—and afterwards to add a few remarks on the Purulent eye, to which new-born children are peculiarly subject.

To enable us to judge more clearly of these disorders, it is necessary to understand something of the structure of the eye and its appendages: a brief account of which is therefore prefixed, referring the reader, for a fuller and more particular description, to those anatomical authors, who have professedly treated on this subject.

A brief

*A brief Description of the Eye, and
its Appendages.*

THE globe of the eye is composed of three transparent humours, which, from their supposed resemblances, bear the several denominations of the aqueous, the chrystalline and the vitreous.

These humours are contained in three proper coats, or tunics, called the Sclerotica, the Choroides, and the Retina; besides which, there is another, common to the globe and eyelids, called the Conjunctiva.

Of the proper coats, the Tunica Sclerotica is the outermost. This, in the posterior and far greater part of its circumference, is white and opaque; but, in the anterior, is transparent, and takes the name of Cornea.

The Tunica Choroides is situated on the inside of the Sclerotica, between it

and the Retina. It is strongly attached to the Sclerotica, round the margin, where the Cornea begins; whence it passes on, and becomes visible through the transparency of that coat. This part of the Choroides is called Iris, being of various colours in different persons; and in its center, is a round perforation, to admit the rays of light, called the pupil.

The Sclerotica and Choroides are well supplied with blood vessels; particularly the last: the ramifications of which, when well injected, appear to be wonderfully convoluted.

The Retina, or internal coat, appears to be an expansion of the medullary part of the Optic nerve, being a white, thin membrane, of a very soft and tender texture. It lies immediately behind the vitreous humour, round which it is continued to the borders of the chrystalline, and is generally believed to be the immediate seat of the sense of vision.

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The globe of the eye rests in the orbit, upon a large body of adipose membrane; and is moved in different directions, by four straight, and two oblique muscles. Five of these take their origin from the bottom of the orbit; the inferior oblique alone arising from its edge: and they are all continued forward, to be inserted by a tendinous expansion into the anterior part of the Tunica Sclerotica; which expansion, having a white colour, has acquired the name of Tunica Albuginea.

The Tunica Conjunctiva is a thin transparent membrane, which lines the inner surface of the eyelids, and, at the edge of the orbit, has a fold, and is continued forward, over the anterior half of the globe of the eye. It is exterior to all the other coats of the eye, and connected with the Tunica Albuginea, by means of a cellular substance; from which it may easily be separated, in the dead subject, by dissection. Though, in a sound state, it contains only the serous part of the blood, it is, notwithstanding, extremely vascular; as is

proved by injections, and also by the inflammations to which it is liable. According to Winflow, it is perforated by innumerable and almost imperceptible pores.

The vascular state of this coat appears to be much greater, in that part which lines the inside of the eyelids, than in that which covers the eye; and its continuance, from the eyelids to the eyes, is of great use to prevent the ill consequences which might otherwise ensue from the insinuation of extraneous bodies between them.

The tears are secreted by a conglomerate gland, called *Glandula Lachrymalis*, which is situated in a small depression of the orbital process of the *Os Frontis*, near the outer angle of the orbit; from which they are poured out by small ducts, and continually spread over the surface of the eye, to keep it clear and transparent. They pass from the eye, through two minute orifices, at the inner angle, called the *Puncta Lachrymalia*, which open into a
small

small bag, called *Sacculus Lachrymalis*; and this bag is continued thence, through a bony channel, and opens immediately into the nose.

The little red body, observable at the great or inner angle of the eye, is called *Caruncula Lachrymalis*. It was thought to be the secretory organ of the tears, until a more accurate dissection discovered the true gland at the opposite angle. Some have since supposed, that it secretes an oily humour, like that issuing from the small glands on the inside of the eyelids; but, in fact, we seem to have acquired no certain knowledge either as to its structure or use. It may be said to direct the tears into the *Puncta Lachrymalia*; and, in that office, is much assisted by a reduplication of the *Tunica Conjunctiva*, which has been called *Valvula Semilunaris*. This valve is to be seen plainest, when the eye is turned toward the nose. It is situated close to the Caruncle; and is shaped like a crescent, with its points inclined to the *Puncta Lacrymalia*.

The situation and figure of the eyelids are too obvious to need description. They hang like veils or curtains before the eyes; and are furnished with muscles, capable of very quick motion, to defend the eyes from those injuries, to which their situation might expose them. The structure of the eyelids is of the Reticular kind; and they are very easily distended by accident or disease.

The edge of each of the lids is principally formed by a thin cartilage, called Tarsus; which is adapted to the shape and roundness of the eye. The lower edge of the superior cartilage, and upper edge of the inferior, meet each other; and are termed the ciliary edges.

It deserves notice, that these cartilages do not terminate in a line, like the sharp edge of a knife; but rather flat, like the back of it; forming two edges, one external, and the other internal. When the eyes are shut, the external edges meet: but the internal are preserved at a small distance from each other; leaving a gutter
or

or groove, through which the tears are supposed to pass from the Lachrymal gland to the Puncta Lachrymalia, while we are asleep.

It should also be remembered, that the Cilia, or eye-lashes, arise out of the external edge of the termination of this cartilage; and on the internal, at an evident distance from them, is a line of small orifices, which are the excretory ducts of small glands that lie on the inner surface of the Tarsus, and are called Glandulæ Ciliares, vel Meibomii. The use of these glands is to secrete a sebaceous matter, similar to soft wax, which constantly covers the edges of the lids, and keeps them supple.

The above short account of the eye, and its appendages, seems to contain all that is necessary to a right understanding of the following remarks.

Of the Ophthalmy.

THE term Ophthalmy is generally used to express—an inflammation of that part of the Tunica Conjunctiva, which covers the globe of the eye.

It has before been observed, that the Tunica Conjunctiva is a transparent membrane, and receives its white colour, in a state of health, from the Tunica Albuginea, which lies immediately behind it: but, notwithstanding this transparency, it is proved to be vascular by the inflammations which sometimes attend it; during the continuance of which, those vessels, which naturally admit only the finer lymphatic parts of the blood, are enlarged, and becomes visible, by the intrusion of the red particles.

The Ophthalmy is found in very different degrees. It sometimes occupies only a part of the globe of the eye; but, in common, it extends itself over the whole.

It

It may be superficial, affecting the Conjunctiva only ; or so deep as to reach the Sclerotica and internal coats. In general, the Conjunctiva does not appear to be much thickened : but sometimes its membranous appearance is entirely destroyed, and its projection causes the Cornea to appear depressed and sunk in the globe. When the Ophthalmia is in this state, it is, for the most part, accompanied with violent pain ; and is described in many books under the name of Chemosis.

The pain, however, is not always in proportion to the appearance of the Ophthalmia. In many cases, where the inflammation seems to be of the slightest kind, the agony is almost insupportable ; especially when the eye is exposed to the light : and in some others, where the inflammation appears to be most violent, the uneasiness is so trifling as scarce to be mentioned, though the eye be constantly open and uncovered.

Whatever the degree of inflammation may be, it will, in general, be found that

light is offensive to the eye; and in order to avoid the pain which it occasions, persons, who labour under this complaint, are frequently observed to keep their eyelids shut.

For greater security in this respect, as well as to prevent the motion of the eye, some have practised the injurious method of binding compresses, or plaisters, tight over the eyes, which, by confining the tears, add to the irritation; and, by their pressure, increase the obstruction in the minute vessels on which they act. Instead of this, I would recommend the use of a pasteboard hood, or bonnet, to be worn at a greater or less distance from the eyes, as the particular case may require: and, if this is insufficient to prevent their being hurt by the light, the patient must submit to the confinement of a room, where little or none enters.

But it must not be supposed that the access of light is the only cause of pain. Instances are common, in which, though the light is excluded, the sufferings of the

patient are continual and excessive, from acute pains, which dart through the eye to the back part of the head. This may be the effect of a less, as well as greater, degree of inflammation; and such sensations always indicate much danger of the loss of sight.

In some cases, the patients constantly imagine that they see black specks, or points, move before the pupil; which symptom is often observed to come on after the more violent ones are abated. Like the former, it is a frequent forerunner of the Gutta Serena; and is generally accompanied with such a fixed state of the Iris, as renders it incapable of contracting or dilating.

During the continuance of the inflammation, small ulcers are often formed upon the Cornea; which, being first caused by it, serve afterwards to increase it, and render the cure more difficult. These ulcers generally heal in a depression, which is a great impediment to the sight; causing

ing objects to appear as if they were seen through crinkled glass.

Small abscesses are also sometimes formed between the lamina of the Cornea; which, instead of discharging their contents, harden into white opaque specks, and, according to their size, either partially or totally, prevent the entrance of the light. If the specks are superficial, they may wear off in a course of time; but if they penetrate through the whole thickness of the Cornea, they do not seem to admit of any remedy.

The causes that produce the Ophthalmia are various.

It frequently comes on in the most sudden and unexpected manner, without any preceding or concomitant illness. When it happens in this way, the common people call it a blast in the eyes: and it seems to proceed from some peculiar property in the air which surrounds us. Like other epidemical diseases, it often affects a whole neighbourhood at the same time; as was the case during the summer 1778.
at

at Newbury in Berkshire, and in several of the camps, where it was known by the name of the Ocular Disease.

Blows on the eye, according to the force with which they are given, may bring on very different degrees of inflammation. If slight, the effects are most commonly of short duration ; but if violent, a confusion in the coats and humours often takes place, and, in consequence of it, a blindness which appears to be incurable.

Wounds and punctures are attended with consequences equally pernicious. When they are made with swords, knives, or instruments of a form similar to them, they generally glide in between the globe and orbit, pierce the Conjunctiva, wound the cellular membrane that sustains the eye, and, if continued onward, penetrate into the brain itself ; producing the most dreadful head-achs, inflammations, abscesses, and sometimes immediate death : but if the mischief is done with needles, pins, or sharp-pointed instruments like them,

them, they are more apt to pierce the globe, and are attended with the total and immediate loss of sight.

Foreign bodies entangled in the eye are another common cause of inflammation. These, during their continuance, cause great pain, and an inability to move the lids. They also excite an increased secretion of tears; the flow of which is, in general, sufficient to remove them: but if it fails, the lids must be held open by the finger, and the patient desired to look towards the side opposite to that wherein the extraneous substance lies; when, if small, it may be wiped off with wet lint on the point of a probe. If there is reason to suppose that more particles than one are in the eye, it may be necessary to send a stream of warm water over it by means of a syringe; or to fix an eye-cup on the lids, filled with that, or some other mild liquor. The cup being shaped exactly to the part, will permit the lids to be opened or shut at pleasure, whilst the eye is immersed in the fluid which the cup contains.

If the adhesion of the extraneous body to the Cornea is so strong, as to resist these attempts to remove it; authors recommend that it be carefully separated with the point of a lancet. But previous to this, it is adviseable to make use of a thin blunt-pointed scoop, something larger than a common probe; which has this advantage over the lancet, that it will not wound the Cornea, and consequently will leave no scar that might be afterwards an impediment to the sight.

I have met with a few instances, in which, small pieces of iron, having accidentally fallen into the eye, continued there for several days; after which, a suppuration has taken place round them, which has separated their attachment, and they have dropped out of their own accord. But, in general, it must be very unsafe to trust to the operation of nature in such cases; for the continuance of these, or of any substances, in the eye, even for a short time, is likely to bring on in-

C inflammations

inflammations of the most violent and injurious nature.

The small-pox and measles are two other frequent causes of the Ophthalmy. In the former, the face often swells, the eyes redden, and the eyelids are closed for a considerable time, by the glutinous matter which lodges on their edges. At the same time, a thick humour collects between the lids and the globe, which irritates, inflames, and sometimes ulcerates the Cornea. In the measles, the eyes are always affected; and the tears, which flow in an increased quantity, feel remarkably hot, and painful to the patient: but, in both these disorders, the more frequent and lasting mischief is done to the eyelids, as will be particularly remarked in the next section.

The inflammation of the eyes may also be justly esteemed one, among the variety of bad effects which result from a scrophulous habit; being frequently found in company with enlargements of the submaxillary glands, thickness of the lips, and

and other certain symptoms of that disorder: but these kinds of Ophthalmy, like those last mentioned, are, in general, preceded by, and attended with, a disease of the eyelids, which is properly glandular, and will be the subject of a separate chapter.

The venereal disease is produced by so active a poison, that when it has once entered the habit, no part can be said to be exempt from its malignant influence. I have several times seen the eyes inflamed from this cause; and when it happened, the cases were incurable, until mercury, the only specific for the disease, was properly introduced. Monsieur St. Yves observes, that the Ophthalmy very rarely proceeds from a venereal taint; but says, that he has met with several cases, in which it was plainly owing to this cause: he then adds the following remarkable account; “ That, in most of the cases, the
 “ disease in the eyes appeared two days
 “ after the beginning of a virulent Go-
 “ norrhœa. The matter, being suppressed

“ from the Penis, seemed to pass through
 “ the eyes, staining the linen in a similar
 “ manner.” This account is the more
 surprizing, because such an effect, as is
 here described, has never been observed by
 other writers on this subject, or any one
 of the faculty with whom I am acquainted;
 though some of them have had a long and
 extensive practice both in the Ophthalmy
 and Gonorrhœa. Whenever a metastasis
 takes place in the last-mentioned disease,
 which is not uncommon, the change is
 made to one or other of the following
 parts: to the testis, producing a hernia
 humoralis; to the neck of the bladder,
 where it is attended with what Cockburn
 calls the Algado; between the præputium
 and glans penis, causing a spurious kind
 of Gonorrhœa; to the groins, exciting bu-
 boes; or else, being absorbed into the
 blood, it is diffused through the whole
 habit, and, in a longer or shorter space,
 discovers itself by the true and certain
 signs of a general Lues. A metastasis, in
 any of the instances here pointed out, may
 happen,

happen, in consequence of a premature cessation of the primary discharge; but so compleat and quick a transition of the venereal poison, from its first seat to another so distant as the eye, is, I believe, very uncommon, if ever the case. Nevertheless, such a complaint as St. Yves describes may happen, as well during the time that a person has a Gonorrhœa, as at any other: and it is not improbable, that the variations in the quantity of matter discharged from the Urethra, which sometimes are very quick and considerable, might have led him to impute a similar kind of discharge from the eyes to a cessation of the Gonorrhœa as its cause, though it proceeded from a very different one. In general, it may be admitted as a certain fact, that when there is a true venereal Ophthalmy, the habit is universally affected with the same disease.

I have now finished all that appears necessary to be said on the nature and causes of the Ophthalmy: and I proceed

ceed to treat of the proper methods of cure.

Bleeding is generally recommended, and must be highly proper, in almost every species of the disease; but, in what manner, and from what part, the blood is to be taken, are, I apprehend, points which deserve a more particular attention than has been usually paid to them.

In some instances, the Ophthalmia is attended with a considerable degree of fever; in which, as also where the habit is plethoric, it is necessary to take eight or ten ounces of blood from the arm, previous to other more direct modes of relieving the eye: but, in the greater number of cases, the fever, which attends them, being only symptomatic, whatever is sufficient to remove the irritation and pain from the eye, will of course cause the fever produced by them to subside.

By the direct modes of relief, I mean such as are applied upon, or near to, the diseased part: and, among these, that of opening the temporal artery has generally been

been allowed to be one of the most effectual as well as speedy. The nearness of its situation to that of the disease would render it very desirable to take blood from it; but the two following difficulties lie in the way, and prevent its being generally used: the first is, that it frequently will not yield a quantity of blood sufficient to answer the intended purpose; and the second, that troublesome, and even dangerous, hemorrhages have sometimes burst from the orifice, at the distance of many hours from the operation. On these accounts, in general practice, I have preferred the application of leaches to the temples: notwithstanding which, it deserves notice, that, in some obstinate cases, after leaches had been applied, and various other means used, without any success, I have seen remarkable relief procured by a complete transverse division of this artery; whereby the patient not only received benefit from the sudden derivation of a large quantity of blood, but one

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principal

principal source from which the blood circulated to the inflamed part was cut off.

The external jugular vein has also sometimes been opened in this complaint. It receives blood from all the vessels distributed to the external parts of the head; but, not coming immediately from the eye, does not yield so direct a derivation, as the former, or as that which follows.

I have said, that the application of leaches to the temples was, in general, preferable to the taking blood from the temporal artery: it may be of use, however, to remember, that when they have been placed on or very near the eyelids, they have sometimes occasioned them to swell to a very large size, and have increased, for a time, the irritation of the eye. The number of leaches, to be applied, should seldom, if ever, be less than three; and, in order to prevent the mischief above mentioned, it will be proper to confine their application as near to each other as possible, in the hollow of

the temple, about an inch and a half distant from the outer angle of the orbit.

But of all kinds of bleeding, that which is most topical, and would also be most effectual if it could be performed without irritating the eye, is, to bleed the eye itself. This may be done different ways: some scrape the Conjunctiva with a brush made of barley beards; others open the inflamed vessels with a covered lancet; or, if one or two only are distended, glide a sharp-edged crooked needle underneath, which divides them by cutting its way out. The two last-mentioned operations may be very proper, when a speck on the Cornea appears to be supplied with one or more distinct blood-vessels, which resist the common methods of relief; though the cases that require them will be found to occur very seldom: and as to the first method, that of bleeding the eye with barley beards, though I have used it several times, I never found any great or lasting benefit to be produced by it. In a few instances, the pain it occasioned was
very

very severe, and the inflammation, instead of being lessened, was afterwards increased; which I could no otherwise account for, than by supposing that some of the fine invisible spiculæ of the beards were left in the eye. As no care can prevent this accident, it appears to be an insuperable objection to the practice.

The use of blisters in the Ophthalmy is admitted by almost every writer on the subject; but there have ever been different opinions concerning the part, to which they should be applied. Hoffman thinks the feet the most proper: and relates, that a blister, applied on the nape of the neck, had been found by him to increase the pain in the eyes; whilst one applied to the feet gave relief, as soon as the discharge took place. Pouteau, on the contrary, would, in all cases, have them placed as near the diseased part as possible. In short, medical authors have differed in nothing more, than in their ideas, on the utility of what is called Derivation and Revulsion. Both these terms suppose

suppose a discharge, and differ only in the part from which the discharge is procured : which, in the former, is as near as possible to the seat of the disorder ; and, in the latter, at the greatest possible distance from it. Now, from what we know of the laws of circulation, it should seem, that a discharge from any one part of the body would take off equally, or in proportion, from every part ; and consequently, would produce that diminution of the whole quantity, from which alone, any benefit could be expected. Yet this reasoning will by no means accord with fact and experience : for, numberless cases might be adduced from the best practical authors, of the efficacy both of Derivation and Revulsion, in various external, as well as internal, complaints. So far, however, as my own experience has gone, in cases of this kind, the benefits produced by Derivation have been much greater than those by Revulsion : and it is, accordingly, a fact fully verified by practice, that the
nearer

nearer and greater the Derivation is to the inflamed eye, the greater are the benefits produced by it; whether the discharge be of the serous, or sanguineous kind. For these reasons, when the leaches have fallen off, and the consequent hemorrhage has ceased, I would advise a blister, of the size of half a crown, to be applied on the temples, directly over the orifices made by the leaches; and I have noticed, that the quicker in succession they have followed each other, the more efficacious both have proved.

Through the whole progress of the disorder, every thing that can heat or irritate should be carefully avoided; the cooling and antiphlogistic regimen should be used, with gentle laxatives to keep the body in a soluble state. At the same time, the patient is to be guarded with no less care against strong purges, which have often been employed, in this and many other complaints, without answering any other end, than that of lowering and
weakening

weakening the habit. Hippocrates, it is true, has said, that a diarrhœa, or flux of the lower belly, was a cure for the Ophthalmy: but, by this he must be supposed to mean, either a spontaneous diarrhœa; that is, one that takes place without the interference of physic; or one, according to the explication of Riverius, that is produced by the mildest medicines, and such as restrain the fever of the blood.

Besides the methods of cure already pointed out, some local applications are necessary: and that, which I would particularly recommend for this purpose, is the Thebaic Tincture of the London Dispensatory; a medicine composed of Opium and warm aromatics, dissolved in mountain wine. The power of Opium, when inwardly taken, to ease pain and induce sleep, has been long known: but its external use is absolutely forbidden by some very respectable persons of the medical profession. Galen relates, that a gladiator was killed by a plaister of Opium applied to the head: and other authors have said,
that

that blindness and deafness were caused by its application to the eyes and ears. Experience, however, makes directly against these assertions; and proves, beyond contradiction, the great efficacy of its outward use in a variety of cases. In the Ophthalmy, particularly, I have found the Thebaic Tincture, wherein Opium is the principal ingredient, to be eminently serviceable: and the mode, in which I have applied it, has been, to drop two or three drops of it into the eye, once or twice a day, according as the symptoms were more or less violent. When first applied, it causes a sharp pain, and a copious flow of tears, which continue a few minutes, and gradually abate; after which, a great and remarkable degree of ease generally succeeds.

The inflammation is often visibly abated by one application of this tincture only; and many bad cases have been completely cured by it in less than a fortnight, after every other kind of remedy had been used for weeks, and sometimes months,

with-

without any success. But this speedy good effect is not to be expected in all cases indiscriminately. In some, the amendment is more slow and gradual, requiring the tincture to be made use of for a much longer time; and a few instances have occurred, in which no relief at all was obtained from its first application. In cases of the latter kind, in which the complaint is generally recent, the eyes appear shining and glossy, and feel exquisite pain from the rays of light. However, notwithstanding these symptoms, the application is sometimes found to succeed; and whether it will or not, can only be determined by making the trial; which is attended with no other inconvenience than the momentary pain it gives: and when it is found to produce no good effect, the use of it must be suspended, until evacuations, and other proper means, have diminished the excessive irritation; after which, it may again be applied, and bids equally fair for success,

as in those instances in which it never disagreed.

Though I have said, that Opium is the basis of the Thebaic Tincture, it is necessary to observe, that the benefit arising from its application to the eyes must depend on something more than the existence of this medicine in its composition; since I have several times applied a strong solution of Opium in water without any success: the pain, indeed, was sometimes lessened for a while, but the inflammation always remained in its full force, as if nothing had been done. A fomentation made with poppy-heads, and applied warm, has been found comfortable to the diseased part; and, in slight attacks of this disorder, has been sufficient to remove it: but, in more obstinate cases, it has repeatedly been found ineffectual, until the use of the tincture was joined with it.

That I might judge still more certainly, what it was in the Thebaic Tincture, which chiefly caused its utility; I have
also

also once or twice applied to the eye the other principal ingredient in its composition, which is mountain wine; but I found that it gave the patient considerably more pain, and for a much longer time than the tincture; and was followed with no kind of benefit.

Having, therefore, satisfied myself, that neither of the ingredients in the tincture was able, in a separate state, to produce the benefit, which they uniformly did in combination with each other, I have for a long time past confined myself to the use of the tincture alone; and, from repeated experience, I am able to recommend it, with the helps and cautions above given, as a most effectual application in every species and stage of the disorder, from the most mild and recent, to the most obstinate and inveterate. In proof of this, I have added, at the close of these remarks, a few cases, selected out of a great number, which occurred in the course of my observation.

It may be expected, that I should say something of the manner in which the Thebaic Tincture operates, when applied for the cure of the Ophthalmy. I have found it very difficult to satisfy myself in this particular, but shall submit the following thoughts to the judgment of the faculty.

Its first obvious effect is the same with that of every other stimulus; which is, to cause pain and heat in the eye: at which time, if the eye be carefully inspected, the number as well as magnitude of the blood-vessels will appear to be increased. At the same time, a flux of tears will be excited from the lachrymal gland, and, it may be, an additional secretion of fluids from those exhaling pores, of which the Tunica Conjunctiva is full. The effects, above described, are most probably produced by the vinous and aromatic parts of the composition; and by their action I suppose the circulation of the fluids to be accelerated, and some minute obstructions to be removed. The
discharge

discharge, it occasions, may also be considered as a derivation, made immediately from the diseased part, by which it is somewhat emptied and disburdened. The severity of the stimulus does not continue long; and as soon as it is gone off, the eye becomes perfectly easy, and the blood-vessels will be found not only to be less than they were on the first operation of the medicine, but much less than before it was applied at all: and the consequent ease and tranquility of the eye may, in part, arise from the depletion which the medicine has occasioned, but more, from the known specific power of the opium, to destroy irritability and abate pain.

The Aqua Saturnina has been very warmly recommended by Monsieur Goulard, as a certain cure for all cases of inflammation, and particularly of the eyes; but the faculty soon found, that though, in recent cases, from external accidents, it has sometimes succeeded; yet, in others

produced by more complicated causes, it did not, and indeed could not afford the like benefit.

A solution of corrosive sublimate, in the proportion of one grain to four ounces of distilled water, has been recommended by Mr. Falck, in venereal as well as other Ophthalmies. This, he also observes, will be useful for removing films and excrescences from the Cornea.

I have frequently used it, for the last-mentioned purpose, with great success; it sometimes removing the film in a short space of time, when superficially situated; though, at others, it took up a much longer space, on account of its firm and deep fixture in the Cornea. In cases of this last kind, it will not only be proper to use this water, but also to touch the speck once a day with a little of the Pulvis Vitri finely levigated, which is to be applied by means of the point of a pencil brush.

The solution of the sublimate will likewise be found to abate the heat and

itching of the eye-lids, to which many are liable; particularly, those who by business are forced to work much and late by candle light.

There is yet one other cause of the Ophthalmia, of which it will be proper to take some notice; and that is, an inversion of the edges of the eyelids, called by Heister, Trichiasis, which occasions the hairs, growing out of the ciliary edges, incessantly to rub against, and irritate the eye.

The cure of this species may be either palliative or radical. The palliative cure is to be effected by extracting the lashes by the roots; but, in this case, the disorder will return with the growth of the hairs, which very soon takes place. The radical or perfect cure can only be brought about, by retracting the ciliary edges, and preserving them in their natural situation.

It is necessary, however, for me to make a distinction between an inversion

of the upper and lower lid : since, though these two disorders produce the same effects, they appear to arise from different causes, and, consequently, to require different methods of cure.

The upper lid and its ciliary edge are preserved, both in motion and rest, in their natural situation, by the equal, though contrary, actions of the *Musculus Orbicularis*, and *Levator Palpebræ superioris* : but the lower lid, whose motion is very small in comparison with that of the former, has no muscle correspondent to the *Levator* of the upper ; and is preserved in its natural state, by the equal action of the orbicular fibres spread over it, and the thickness and renitency of the skin which covers it. The skin of the upper lid, on the contrary, is always very thin, flaccid and folded. When, therefore, the *Trichiasis* affects the upper lid, it appears to be produced by a relaxation of the *Levator Palpebræ superioris*, and a contraction of the superior part of the *Orbicularis* : whereas, a *Trichiasis*

of the lower lid can only arise from a relaxation of the skin, and a contraction of the inferior part of the Orbicularis.

From these considerations it is evident, that the means of affording relief, must be varied in the two cases. In the Trichiasis of the lower lid, the cure will necessarily be accomplished, by increasing the renitency of the skin to such a degree, as to prevent the contraction of the Musculus Orbicularis : but, in the Trichiasis of the upper lid, an increased renitency of the skin could have no effect, and benefit can only be derived, from adding a sufficient stimulus to the Levator Palpebræ superioris, to excite its proper action.

The Trichiasis of the upper lid occurs, I believe, very seldom. I am happy, however, to lay a case of this kind before the public, with the description of an operation that produced the cure, as performed by a Gentleman of great eminence in his profession. (See Case 11.)

The Trichiasis of the lower lid is a more common complaint. When it is

recent, a cure has sometimes been accomplished, by forming a fold in the skin below the inverted lid, to draw its edge from the eye, and preserving the skin in that state by the application of sticking plaister : or, by means of an instrument contrived to pinch up a small portion of the skin, and hang thereby on the cheek ; which, by its weight, answers the same purpose as the plaister, and is less liable to lose its hold.

In slight cases, the skin may recover its tone by these means : but, in others of a more stubborn kind, I have generally been obliged, for the same end, to cut off a small transverse portion of the loose skin below the edge of the lid, and afterwards confine the sides of the wound together, by means of a Suture ; which has effectually answered the purpose. (See Case 10.)

There are cases, however, in which none of these methods will be sufficient for the cure : as, where the ciliary edges are not only inverted, but likewise contracted, or shortened in their length.

Under

Under these circumstances, relief can only be given, by enlarging the circumference of the ciliary edges, which may be done, either by an incision at the outer angle, or by a compleat division of the cartilage called Tarsus, in the middle. The first of these operations is no more than a simple streight incision, which may be made with a sharp-pointed curved Bistoury. The last, which is seldom necessary, will be best performed by the same instrument; only observing, that the point be carefully introduced between the globe and eyelid, and carried below the cartilage, (that is, about one-eighth of an inch;) whence it is to be pushed outward in a horizontal direction, till it has cut its way through the lid. The cartilage being thus intirely divided, each portion will recede towards the angles, and a separation be left between them, which will not only take off the complaint for the present, but prevent the possibility of its return in future.

C A S E I.

M. C. of Mile End, about 26 years of age, caught a severe cold after a miscarriage, in November 1778, which was attended with a violent inflammation of the left eye. She made use of great variety of eye-waters without any effect. After this, she was blooded with a leach on the temple, at three different times, at the distance of a few days from each other; by which the inflammation was certainly diminished: but, upon her taking fresh cold, it returned, and soon became as violent as before. At the end of six weeks, the Thebaic Tincture was first applied, according to the directions before given; at which time a large speck was discernable on the right side of the pupil, and in part covering it. The inflammation was then so extreme, that the least degree of light gave her the most exquisite pain. The first application of the tincture produced

duced a severe smarting for a few minutes, but this going off, the patient felt a remarkable degree of ease. The inflammation was so high, when I first saw her, that, besides the use of the tincture, I directed the immediate application of three leaches to the temple of the side affected, which was to be followed by a blister, as soon as the hemorrhage ceased. It so happened, that the leaches could not be made to hold, and the blister was on that account omitted. The second day the patient found herself greatly relieved, and the eye appeared to be much less inflamed. The Tincture was therefore applied again, and became so effectual, that there was no occasion afterwards for the use of either the leaches or the blister. In three days she could open her eyes without pain; and in a fortnight, the Ophthalmia was entirely gone off, and the Cornea so clear as to admit such a degree of sight, as was sufficient for all the common purposes of life,

C A S E II.

A daughter of Mr. S. near Hermitage Bridge, Wapping, about ten years of age, was suddenly seized, in the month of August, 1778, with a violent inflammation in her right eye, without any known cause. By advice of the apothecary, she had been blooded, had taken much physic, and the Aqua Saturnina had been used: and all without affording any relief. After several weeks, a consultation was held. The eyelids, at that time, were so swelled, that the state of the eyes could not be discovered. The tincture was immediately applied, which occasioned its usual smart; but, in less than an hour, she felt the eye considerably more easy than it had been from the first attack. She was that night blooded with leaches and blistered on the temple; and the next day the tincture was applied again, and had the same good effect as before. The third morning, she could
open

open her eye, so as to see objects : but the pain, which the light gave her, was still so great, that she was glad to shut it as quick as possible. A pasteboard shade was kept constantly over it, and for several days she was forced to live in a darkened room. The tincture was applied daily for three weeks ; always affording great ease, and producing a flow, but constant amendment. After this, it was repeated every second day for another week ; when the sight was so good, that the shade became unnecessary. The eye was then washed night and morning with a weak solution of sublimate, and the pulvis vitri applied to a small speck on the Cornea. These she has used for more than twelve months, with great success ; the speck being much smaller, and the sight clearer, than they were, when these medicines were first employed.

CASE

C A S E . III.

J. S. driver of the Dover stage, was seized, in the month of April, 1778, while upon the road, with symptoms of a violent fever, which obliged him to desist from driving. He took some sweating medicines, which, at the end of two days, greatly abated the fever: but he was then attacked with a sudden and most severe pain in the right eye, which shot through to the back part of the head. The apparent inflammation was less, than might be expected from such severity of pain. He was bled in the arm, purged, blistered behind the ears; at different times, five leaches were applied to his temples; and a fomentation of poppy heads was likewise used: but none of these means afforded him any great relief. After two months confinement, the pain gradually abated of its own accord, but the sight in this eye was totally lost. The latter end of June,

he

he returned to his business of driving; which he was able to perform with his left eye, and continued in it till the 30th of August following, when, in the night, he was attacked, in a similar manner, with violent inflammation and pain in the same eye, which had before been diseased. He was bled, and his head was embrocated with an anodyne liniment: but receiving no relief, on the 2d of September he came to London for advice. The inflammation was then such, that it truly answered the description of the Chemosis; having exactly the appearance of raw flesh. The pupil of the eye was much enlarged, and the Iris appeared uneven in its inferior part. The Thebaic Tincture was immediately applied, and he was bled that night with three leaches, and blistered on the right temple. The next morning he took a gentle purge; and at noon, when I saw him, was almost perfectly easy. Every morning and evening, he washed his eye with a weak solution of Sublimate, and the tincture was repeated
once

once a day for a fortnight. At the end of this time, the pain was wholly, and the inflammation nearly removed; and, in less than three weeks, he resumed his former employment.

C A S E IV.

A young Lady in the city, from the time of her having the Small-pox, which is now about six years, had been subject to almost continual heating, plunging pains in her left eye, with little or no apparent inflammation. Before she had the Small-pox, her eye was occasionally inflamed; and during its continuance, a pock settled directly upon the sight, which left no speck; but caused a depression, that prevented the rays of light from falling equally, and made objects appear, as if they were seen through wavy glass. She had taken the advice of many Gentlemen of the faculty, who chiefly made use of internal medicines, but without any success.

cess. In January, 1779, at a time when the pain was greater than ordinary, the Thebaic Tincture was dropped into the eye. The temporary smart, which its application always occasions, very soon subsided, and was followed by a degree of ease to which she had been long a stranger. It was repeated every day for a fortnight with constant benefit; and from that time to the present, she has never had the slightest relapse.

C A S E V.

E. S. of Curriers Court, London Wall, aged 53, was deprived of her hearing fifteen years ago, when she laboured under severe pains of the head, and had eruptions on different parts of the body. These complaints were accompanied with a violent inflammation in the left eye, and followed by a large speck on the Cornea; which, though it did not wholly take away the sight, rendered it intirely uselefs.

E

In

In October, 1778, the inflammation suddenly returned with great violence in both eyes, producing total blindness and great pain. It continued a week before I saw her; when both eyes had specks upon them, and the pupil of the left appeared to be wholly covered. After applying the tincture to the right eye, I waited to see what effect it would produce; but, in a very few minutes, she found so much ease, as to desire I would apply it also to the left. The next day, both eyes were blooded with a brush of barley beards; which operation, in this instance, as I have found in many others, gave great pain, and had no salutary effect. The tincture was applied every day; and at the end of a week, the symptoms were much abated: but the inflammation being still considerable, three leaches and a blister were ordered to each temple, and a gentle purge was administered every third morning. The tincture was repeated daily for three weeks; after which, she could see sufficiently to conduct herself from her own house to
Walbrook;

Walbrook: and the immediate ease, which she constantly experienced on every application of the tincture, induced her to continue it for near two months after the inflammation was apparently subdued. When the use of the tincture was left off, the speck on the left eye was evidently thinner and smaller than when I first saw it, so that she could distinguish objects sideways. The sight of her right eye was distinct and perfect.

C A S E VI.

Mr. S. a Ship-broker in the City, about 35 years of age, was attacked, in February, 1779, with a most severe and painful inflammation in the eye; which was much increased by close attention to business. On the third day from its appearance, the Thebaic Tincture was applied; which gave him extreme pain for near the space of an hour, without affording the usual subsequent relief. The

same evening, he was blooded with leaches, and blistered on the right temple: in consequence of which, he found himself easier. The day following, the use of the tincture was repeated, and gave him the same pain as before. For several months, he had been subject to a violent aching in both temples: which, in the right, was much relieved by the use of the leaches and blister. For the two purposes, therefore, of easing the left temple, and benefiting the eye, the same applications were directed to that temple, as had been used to the right: and they happily succeeded so far, as to remove the pain in that part, though the inflammation in the eye continued as violent as at first. The tincture had been tried three times, previous to the last bleeding, and always gave the same pain without procuring any ease or amendment. Three drops of a strong solution of Opium in water were therefore dropped into the eye, which seemed to deaden the pain; but, after a week's trial, there was still no change

change in the appearance of the inflammation. A third application of leaches was therefore made to the right temple, and followed with another blister: after which, it was again tried what effect the Thebaic Tincture would produce; when it was attended with no more smart than what it usually occasions; and, in a few minutes, the same ease succeeded as in other cases. It was repeated for ten days, night and morning: in which time, the inflammation wholly subsided, and the patient was perfectly cured.

The three following Cases were particularly noticed by Mr. Wathen, in the course of his practice, more than twenty years ago, and will be additional proofs of the efficacy of the treatment now proposed.

C A S E - VII.

A child of Mr. E. in New-street, Bishopsgate, had the Measles in the year 1752; immediately after which, a small speck was discernible on the Cornea, attended with considerable inflammation. The inflammation varied much at different times: but the speck constantly increased; and, at the end of twelve months, when Mr. Wathen first saw her, was become so large, that it greatly obstructed the sight. She had been blooded and blistered, and had taken many opening and alterative medicines. Mr. W. therefore, had recourse to the tincture only, which gave her great pain, and he was apprehensive its application had been premature: but the next morning convinced him to the contrary, as she could then open the eye, and bear the light; which she had not before attempted for a long time. He therefore continued the use of
it

it every morning for a fortnight, when the inflammation was quite gone, and the speck somewhat diminished. Various detergent eye-waters were applied, always guarded with the tincture; and, when the eye was in any pain, or shewed the least tendency to inflammation, the tincture alone was used. In a few months, the speck was wholly removed; and October the 16th, 1754, Mr. W. examined the eye, and found it in every respect as well as the other.

C A S E VIII.

Mrs. S. of Skinners-street, had been subject, for twelve years, to an inflammation of both eyes, which originally proceeded from a violent cold she caught by going imprudently into the cold bath. Part of the time, she had been in Guy's Hospital; and, for three years, in the London Infirmary. When she came to Mr. Wathen, he used all the common me-

thods, and every thing else he could think of, to relieve her, but with as little effect, as others has done before him. At length he applied the Thebaic Tincture, from which she found immediate benefit; and could soon distinguish faces, and bear the light. Previous to the use of it, the Cornea was exceedingly thickened, but afterwards became gradually thinner. It was continued once a day for several months, always affording great ease; till at length, the sight became so clear and strong, that she could see to thread a fine needle. Some small symptoms of inflammation afterwards appeared at different times; but they were prevented from coming to any height by the immediate use of the tincture.

CASE

C A S E IX.

The son of a weaver in Spital-fields was attacked with a violent inflammation in his right eye, which speedily swelled to a prodigious size. Its natural appearance was entirely destroyed; and instead of it, it had that of a large fungous excrescence. It had continued several weeks, giving the child excessive pain, before Mr. Wathen saw it. Bleedings, fomentations, &c. had been tried without effect. Its size was then so large, that it could not be retained within the eyelids, and the child's health and strength were daily decaying; so that it became absolutely necessary to have it taken out. Mr. W. therefore performed the operation, which was attended with no bad circumstance till the third day; when a most violent pain seized the wound and orbit, which made him very apprehensive that the event would prove fatal. He,

however, applied the Thebaic Tincture, which almost instantly gave ease. The child slept well, and every threatening symptom disappeared. The wound proceeded regularly through its different stages, and, in as short a time as could be expected, was compleatly cured.

This Tincture has repeatedly been applied, with great advantage, for the relief of those inflammations, that continue troublesome after operations performed on the eye: particularly, after the extraction of the chrySTALLINE humour, and the puncture that is sometimes necessary to be made in the Cornea, to discharge matter lodged between it and the Iris.

C A S E X.

*An Ophthalmia produced by an Inversion of
the lower Lid.*

S. S. of Creed-lane, Doctors Commons, aged about 50 years, applied to me, in the month of May, 1779, on account of an inflammation in her left eye, which had continued nearly two years, notwithstanding the use of various medicines and applications, recommended by different persons. On examining into the case, it was evident, that the inflammation was caused by an inversion of the lower lid, which occasioned the lashes to rub constantly against the eye. She had for many years been subject to convulsive fits, which affected every part of her body; and the disorder in the eye first came on, after a severe attack of this kind. I immediately applied sticking plaister to the lid, and continued it down
upon

upon the cheek in such a manner, as to make a fold in the skin; which effectually answered my design, of keeping out the edge of the lid, so long as the plaister remained well on the part: but, after trying it for several days, I found, that it was frequently liable to slip; and that, when this happened, the lid immediately returned to its inverted state. I therefore fixed an instrument, something similar to that contrived by Bartischius, and represented by Heister, (plate 15, figure 20) upon the skin below the lid, and let it hang upon the cheek; which, by its weight, kept the lid from becoming inverted: but, as the benefit it produced was only temporary, and the pinching of the skin, which was necessary to confine it, gave the patient pain, I soon omitted the use of it, and, with Mr. Wathen's consent, performed the following operation. I first removed a transverse fold of the skin below the edge of the lid, and then with three sutures I confined the sides of the wound close to each other.

The

The day after the operation, the integuments, furrounding the eye, were considerably swelled; but the swelling soon subsided by the use of the Aqua Saturnina, applied as a fomentation. No difficulty afterwards occurred: the eyelids continued constantly in their natural state; the inflammation of the eye was speedily removed, and the patient became perfectly well.

In December following, the same woman applied again with an inflammation in her right eye, which arose, like the former, from an inversion of the lower lid. The left eye had been quite well ever since the operation. I repeated it on this eye; and, without any difficulty, it produced a perfect cure.

CASE

C A S E XI.

*Communicated by a Gentleman of the first
Rank in his Profession.*

*An Ophthalmia produced by an Inversion of
the upper Lid.*

“ The worst kind of Trichiasis, which I ever saw, was in a young Gentleman about 18 years of age. Previous to my seeing him, he had repeatedly undergone the usual discipline of extracting the hairs from the Cilia : but, when they grew again, they took their usual course towards the Tunica Conjunctiva ; and, by continual irritation of that membrane, gave constant pain, and produced, what writers on diseases of the eyes call Chemosis, and what gives me the idea of fungous flesh, or of a villous surface, resembling the pile of red velvet. After a variety of treatment, as bleeding, purging, blistering, setons,

bark, alteratives, and the use of every other method, which the most eminent practitioners, both in physic and surgery, could think of; recourse was had to eye-waters and falves, and the Panaceæ of the most celebrated empirics of the time: but all proved ineffectual, and the young Gentleman became totally blind.

“ At this period I was consulted, and at the same time was asked, if I had any objection to the opinion of a celebrated itinerant Oculist, who was at that time in England. I said, certainly not. We accordingly met; and when we had examined the eye, and heard what had been done, he proposed the taking off a fold of the skin of the superior Palpebra. I told him, I should not object to his making the attempt, if the gentleman and his father gave their consent: though I own, it was my opinion, that it would not succeed. At that time, I had not considered the case sufficiently, though I intended to do it very critically before we met again. A day for the operation was fixed: but,
previous

previous to that, the Oculist sent a message to the young Gentleman's father, which discovered the true Charlatan, and immediately determined the Gentleman not to have any thing more to do with him. I was again sent for : and, having well considered the case, I freely delivered my sentiments, that the method which had been proposed, did not seem likely to me to be successful : as the fault was not in a superfluity of skin, but in a relaxation of the Elevator Palpebræ superioris muscle. Having premised this, I recommended, and performed the following operation. I made an incision through the integuments of the upper lid, from the inner angle of the eye to the outer ; I then separated the fibres of the Orbicularis, so as to denude the expanded fibres of the Elevator muscle, as near to their termination in the edge of the lid as possible ; which being done, I applied a small cauterizing iron, adapted to the convexity of the globe of the eye, and made pretty warm, by passing it two or three times over the

tendino-

tendino-carnous fibres. My intention in this was to occasion a slight irritation, which I hoped would produce the same effect, as we frequently observe to happen after burns in different parts of the body, especially in the hands, after which the fingers often contract, and in many instances have remained contracted ever after. This happy effect took place in the present case: and, though the eyelid was kept constantly higher than I could have wished, the Trichiasis was cured, the inflammation subsided, and the eye became useful.

F

Of

Of the Pforophthalmy, or Inflammation and Ulceration of the Eyelids.

IN the description of the eye, prefixed to these remarks, it has been observed, that the Tunica Conjunctiva is reflected from the inside of the eyelids, to cover the anterior part of the globe of the eye. Whenever, therefore, that part of this tunic, which covers the globe, is inflamed to any great degree, that which covers the eyelids is liable to be affected in the same manner: but, as this is no more than a symptom, or immediate effect, of the Ophthalmy, it will, in general, be found to go off, as soon as the disorder, by which it is occasioned, is removed.

This, however, is not always the case. In some instances, the inflammation of the lids is attended with an ulceration of
 3 their

their edges, upon which a glutinous matter lodges, that incrusts and becomes hard ; and, when they have been long in contact, as, during sleep, connects them so closely to each other, as to require painful efforts for their separation.

Now this is the disorder, of which I propose here to treat. I have called it Pforophthalmy* : because that name is more descriptive of its nature, than any other I could find.

To form a clear idea of the Pforophthalmy, it should be remembered, that on the inside, and near to the edges, of the eyelids, is situated a number of small glands, secreting a sebaceous fluid, which is excreted by a row of ducts opening immediately on the inner edges of their border. These ducts, and sometimes the glands themselves, appear to be the parts principally affected ; and the fluid which is secreted by them, instead of being moist

* Castellus defines the Pforophthalmy to be *Oculi palpebrarum scabies pruriginosa*.

and mild, and serving as a defence against the acrimony of the tears, is changed into a sharp, acrid, and adhesive humour; which causes a constant irritation of the eye and lids, ulcerates the inner edges of the latter, and, for want of proper attention, has often perpetuated the disorder for a great number of years.

St. Yves describes this complaint more accurately than any other author I know, in a chapter, "*On the Ophthalmia subsequent to the Small-pox.*" He there observes, "that the pustules on the edge
" of the cartilage of the eyelids, which
" penetrate between the Cilia and their
" inner surface, do not cicatrize, by reason of the acrimonious serosity which
" incessantly humects the eye: hence
" follow ulcers which last sometimes several years, and even during life, if
" they be not remedied *."

It must, however, be remarked, that, though both the Small-pox and Measles

* St. Yves, page 191.

are certainly very frequent causes of this complaint, they are not the only ones. An inflammation of the globe, in itself but small, will sometimes affect the lids, so as to cause them to swell and become red; in consequence of which, there will be an adhesion of one to the other, and often an universal ulceration of their edges. The small pustules, also, which form on the outer margin of the ciliary edge, where the lashes grow, and are known by the name of Styes, have, in some instances, brought on an inflammation which has been continued to the sebaceous glands, and produced all the consequences before described: but, in general, styes give no trouble; they break, and then disappear.

The ulceration in the Pforophthalmy is usually confined to the edges of the eyelids; but sometimes it is seen to extend over their whole external surface, and even to excoriate the greater part of the cheek. In cases of the latter kind, the inflammation which accompanies, has often much the appearance of an Erisipe-

las, and will receive most relief from an antiphlogistic and sedative treatment. The use of the citrine ointment, which will hereafter be recommended, must in such instances be omitted, until the extreme irritability of the skin has been abated by suitable applications.

This disorder is also sometimes attended with a contraction of the skin of the lower eyelid; in consequence of which, it is drawn down, and the inner part turned outward, so as to form a red, fleshy, and most disagreeable appearance, called Ectropium. Whenever this is seen, it proves the complaint to be of the most obstinate nature; though it is generally removed by the cure of the Pforophthalmy, from whence it is derived.

Several ancient, as well as modern, writers have given an account of disorders affecting the edges of the eyelids, which bear some resemblance to that I am now describing; but these are represented, either as so slight and trivial, on the one hand, that (if nature requires any assistance)

ance) the most simple topical applications will be found sufficient for the cure; or else, they are, on the other hand, described as symptoms of the Scrophula, Scurvy, or Lues Venerea, and as incurable by any external means, until the supposed disorder in the habit is properly corrected. Now, it should seem that these last-mentioned effects, which they impute to scrophulous, or other internal, causes, are in reality the very same disorder, to which I have given the name of the Pforophthally; though, in their accounts, we meet with no accurate description of its seat, progress, or effects. And I am further of opinion, that it is much oftener a local complaint, than is generally believed: for, in what manner can it be determined, that it arises from a scrophulous or venereal cause? This, I apprehend, can only be known with certainty from the appearance of such other symptoms, as are clearly scrophulous or venereal: whereas, numberless cases continually oc-

cur, in which the eyelids alone are affected, without a single symptom of any other disorder whatever, and to which, all the common methods of relief have been applied in vain.

I proceed, therefore, to give a more particular description of the Pforophthalmy, according to the ideas which, from experience, I have been led to form of it. And, in cases of this kind, I consider the ducts of the ciliary glands as really ulcerated: whence it arises, that the oily soft fluid, secreted by these glands, being mixed with the discharge from the ulcers, is changed into an acrid humour, which quickly inspissates into a hard adhesive scab. This scab, lodging on the orifices of the ducts, spreads the complaint, by the irritation which it causes, over the whole internal edge of the eyelid; and prevents the possibility of its being relieved, until local remedies are applied, to prevent the formation of the scab, by curing those ulcers which served to produce it.

But though I am of opinion, that the Pforophthalmy often and most commonly takes place, entirely independent of any other complaint; (at least, as far as can be discovered,) it is yet necessary to be observed, on the other hand, that it is sometimes accompanied with the plainest marks of a scrophulous constitution, and seems evidently to arise from it. In the cases now referred to, as also in scrophulous cases of all sorts, a variety of internal medicines have been recommended at different periods. I shall mention a few of the principal.

The Extractum Cicutæ was proposed by Dr. Storck of Vienna, as a medicine very proper for the cure both of the Cancer and Scrophula: and he has given twenty cases, in which, under his management, it met with the desired success, though not before it had been long used. The dose which he gave at first, was a pill consisting of two grains, to be repeated twice a day; which was afterwards increased

increased to three pills each dose, and repeated three or four times in the same space. Dr. Storck does not mention the Pforophthalmy as accompanying any of his cases, but observes, that in several different complaints of the eyes, he had given it with good effect: notwithstanding which, to conclude the whole, he adds, “*in malis inveteratis plerumque frustra fuit.*” Dr. Fothergill, in the third volume of the London Medical Observations, gives it as his opinion, that the *Cicuta* is much more beneficial in scrophulous than in cancerous distempers, but confesses it is not always attended with equal success.

The Cortex Peruvianus has also had a great number of advocates. In the first volume of the London Medical Observations, Dr. Fothergill and Dr. John For-
dyce particularly recommend it for inveterate Ophthalmies. They both agree in supposing it will resolve glandular tumours; and Dr. Fothergill proposes it to
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be joined with Calomel pills, though his chief dependence is upon the Bark.

The internal use of the sea water, and bathing in the sea for scrophulous complaints, have been approved and recommended by the most eminent physicians, for a great number of years; and seem to have acquired a solid reputation. I must, however, take the liberty to remark, that sea-bathing is highly improper in every inflammatory disorder to which the eyes are liable; and I have frequently observed that it brought on very violent pain, and much aggravated the complaint.

Many mineral waters in this country are likewise much esteemed for their salutary effects, when taken for the Scrophula: but, however, judiciously, these, or internals of any kind, may be prescribed, they are absolutely insufficient in themselves for the cure of the Pforophthalmy, unless assisted by proper applications to the part affected. The number of patients we meet with, who have gone through some, and even all these processes, without

without any kind of benefit, are sufficient evidences of the truth of the assertion: and this will be more apparent, if we recollect how many other external disorders we daily see, which are known to proceed from internal causes, and yet require a topical treatment.

I go on to speak of the proper applications for the cure of the Pforophthalmia. And here it will be necessary for the reader carefully to attend to the description before given of this disorder: (see page 72.) for, on a due consideration of what I have there said, it will appear, that my design must be, to soften and remove the scabs, and to use such applications to the ulcers, as may correct the acrimony of the discharge, promote digestion, and bring them into a state for healing.

The intention of Monsieur St. Yves, in his direction for the cure of ulcers on the edges of the eyelids, subsequent to the Small-pox, does not appear to be much unlike that which I
have

have here mentioned ; as appears in the following quotation I have made from him : “ Ophthalmic waters, in general, “ are of very little service ; but I have “ found, from my own experience, that, “ by touching them, with the Lapis Infernalis, they cicatrize easily. The “ violent heat of the caustic must be “ abated, as soon as they have been “ touched, by washing the eye in a small “ glass full of warm water ; you must, “ above all, take care, that the part of “ the eyelid, which was cauterized, may “ not bear against the globe of the eye, “ till the pain is entirely gone off. They “ may be touched, in this manner, once “ or twice a week, till they seem to require no more use of the caustic ; then “ lay on these places, morning and evening, Tutty reduced to a very fine powder ; it will cicatrize them *.”

Now, though the intention of Monsieur St. Yves, in the above advice, is similar to that I have mentioned ; yet the danger of

* St. Yves, page 194.

applying

applying a caustick so powerful as the Lapis Infernalis, to a part so tender as the edge of the eyelid, and so near the eye, appears to be a real objection against its use; and has, I believe, deterred most of the faculty from following the practice: and yet it is remarkable, that amidst the very considerable improvements, which have of late been made in the practice of surgery, no other outward applications have so much as been proposed; at least, any, which seem at all adapted to the nature of the disorder, or which are supported by any proofs of their utility.

To supply this deficiency, in so important a branch of practice, is one principal design of the present publication. For this purpose I would recommend the use of the Unguentum Citrinum of the Edinburgh dispensatory, the composition of which is as follows:

R

Hydrargyri unciam unam,
Spiritus nitri uncias duas.

Digere

Digere super arenam, ut fiat solutio,
 quæ calidissima adhuc misceatur cum
 Axungia Porcinæ liquefactæ et in co-
 agulum denuo tendentis librâ unâ,
 strenue agitando in mortario marmoreo
 ut fiat unguentum.

If it is well made, it forms a hard salve,
 of a full yellow colour: but if the pro-
 portions are not exact, or the lard is
 added either too hot, or too cold, it will
 want both its proper colour and con-
 sistence; and its success will be much
 less certain than it otherwise would be.

The manner in which it is to be used,
 is as follows: Fill a small box with it;
 let it be warmed before a candle, till the
 top of it is melted into an oil: this oil is
 to be taken off upon the end of the fore-
 finger, and carefully rubbed into the edges
 of the affected eyelids. The use of it once
 in twenty-four hours, will be sufficient;
 and that should be, when the patient
 goes to bed. Immediately after the ap-
 plication

plication, a soft plaister, spread with the Ceratum Album, is to be bound loosely over the eyelids, which will preserve them moist and supple in the night, and contribute to prevent their adhesions to each other. Notwithstanding this, some difficulties will always attend the opening them in the morning: for the further relief of which, it will be found of great use to cleanse them with milk and fresh butter, well mixed together, and warmed; which will gradually soften and remove the incrusted matter, and, in a short time, enable the patient to separate them without any pain.

In some instances, where the eye has been very irritable, I have been obliged to apply the ointment by means of a small brush made with camels hair; but if the finger can be used (and in most cases it may), it certainly is better than any instrument, as the ointment may, by its assistance, be more thoroughly applied to the diseased part.

The

The Pterophthalmia is often accompanied with a greater or less degree of inflammation on the globe of the eye: the thebaic tincture will therefore be of the same use, as in the cases of the Ophthalmia already given.

I have before said, that a serophulous constitution is sometimes the source of this disorder. In that case, though the patient is perfectly cured, as far as respects the external symptom, there is yet great danger of its returning on some future occasion. To prevent this, it is of the utmost importance to pursue an alterative course of medicine for a considerable time; besides which, an issue should also be opened, to divert the humour from the eye. The good effects of these are, nevertheless, not to be expected, without the strictest temperance in diet, and a general habit of regularity in living. In some instances, it will so happen, that no discharge can be procured from the issue: and when, upon trial, this is found to be the case, a perpetual blister, or some

other drain, must be substituted in its stead.

I shall now relate, in proof of the utility of the method of cure I have been describing, a few cases, which have come within my own experience or knowledge.

C A S E XII.

The daughter of M. B. of Nightingale-Lane, East-Smithfield, about five years old, had the measles, in the month of June 1778, of which she recovered in the usual time: but while they were upon her, her left eye became violently inflamed, so as to occasion great pain. Her mother, at first, washed it with the common water from the postern on Tower-Hill; and, for two days, this seemed to be very serviceable: but afterwards, the inflammation returned, and in as violent

a degree, as on the first attack. Various advice was taken, and carefully followed, till Monday September the 21st, when I first saw her. The eyelids were then so much swelled, that it was not possible to see the state of the eye. I immediately applied the Thebaic Tincture; after which, she was bled with three leaches, and blistered on the temple. The next morning I was able to separate the lids, and perceived that the eye was considerably inflamed. The Thebaic Tincture was applied once every day. On the 25th the inflammation was much abated, and the child's principal complaint seemed to be, that the lids adhered so close to each other, when she awoke in the morning, that it hurt her much to open them. The citrine ointment, and white cerate, were therefore applied every night, in the manner above directed; and, in the morning, before the child attempted to open her eyes, the gummy adhesive parts were taken off, by anointing them with a mixture of fresh butter and milk. No me-

dicines were now given, as the child had been sufficiently purged before: and, on the 29th of the same month, she was perfectly cured of her complaint; and the eye, which had been affected, was equally strong, and, in every respect, as well as the other.

C A S E XIII.

A son of Mr. E. of New-Street, Broad-Street, Golden-Square, about seven years of age, was seized, in December 1778, with a violent cold, which fell into both eyes. Nothing was done, except washing them with cold spring water, for a month; at the end of which, they became so painful, that he could not bear the least degree of light, and was constantly confined to a room, which was almost dark. An apothecary was consulted, who ordered one leach to each temple, and afterwards a blister behind each ear.

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The leaches were applied three different times in the course of three weeks; after which, blisters were put on the back, and nape of the neck, and, during the whole time, an eye-water was used: but all was without effect. On the 24th of March 1779, when I first saw him, the eyelids were much swelled, as in the former case; so that it was impossible to discover what damage the eyes had received. The Thebaic Tincture was applied, and, in a few hours, proved so efficacious, that the child was able to bear the light, and could play in it, without any cover on his eyes. On the 25th the tincture was repeated, when the Cornea was seen to be perfectly clear, but the Tunica Conjunctiva much inflamed. He was bled that night with three leaches, and blistered on each temple. On the 29th, he could see to walk as far as from his own house to Walbrook. After this, the tincture was applied every second day. April 3d, the edges of the eyelids appeared very red; some gum was

seen sticking to the lashes; and they adhered much to each other in the morning. The Citrine Ointment, White Cerate, &c. were carefully applied, as in the last case. April 6th, the inflammation was entirely removed, both from the eyes, and eyelids, and the sight was perfectly clear, and free from blemish.

C A S E XIV.

A daughter of Mr. S. of the Admiralty office, when about ten months old, was suddenly seized with a swelling of the eyelids, and great discharge of matter from between them. For this complaint, she was under the care of an apothecary, who gave her many medicines, and washed the eye with variety of eye-waters; notwithstanding which, the disorder continued near twelve months, with great violence, and was attended with considerable pain.

At

At first, the right eye only was inflamed ; but afterwards, the left also was affected ; and in that eye the inflammation became the most obstinate and troublesome. At length, her friends carried her into the country, where she recovered ; which, they supposed, was owing to the change of air. Notwithstanding this, in May 1776, the child being then about four years old, the same disease returned in the left eye, with equal violence ; but was relieved in a very short time, by the use of an ointment given by a stranger. She continued well till January 1779, when the left eye became again affected, as in the last relapse. The ointment, which had before cured her, was now tried without any success. She took physic every third morning for several weeks, but was still unable to look at the light ; and the eyelids were much inflamed and swelled. In this state I first saw the patient ; when, the lids being separated with difficulty, I discovered a large speck, which appeared to cover the greater part of the Cornea.

I advised the application of three leaches, and a blister, to the left temple: the Thebaic Tincture was also made use of; and being found to give great ease, was repeated every day. In a fortnight the inflammation was considerably abated, and the child could open her eyes with ease: but still, the edges of the lids appeared red, and adhered much to each other during the night; on which account, the citrine ointment, and white cerate, were applied at bed-time; and the mixture of warm butter and milk, when she awaked in the morning. In ten days more, the inflammation was wholly removed, both from the eyes and eyelids: the speck, also, which at first appeared to cover the whole pupil, was greatly reduced, and the sight was so far restored, as to become very useful. An alterative powder, composed of *Æthiops Mineralis* and *Cremor Tartari*, was given twice a day; and towards the completion of the cure, an issue was opened in the left arm. The sublimate eye-water was continued a long time after the other applications,

on account of the speck ; which, though it in part remains, as is well known to be usual in such cases, was, however, by this means, gradually and greatly diminished.

C A S E XV.

In the month of July 1778, I was applied to, by a porter belonging to the East-India House, who was upwards of sixty years of age, and had a violent inflammation in both his eyes. It had continued more than a month, and laid him entirely aside from his duty. He could not open the lids without feeling very acute pain : but, though the redness of the eyes was considerable, it was not equal to that which is observed in the Chemosis. The Thebaic Tincture was immediately applied ; which, after the usual smart, gave him great relief. The same evening he was bled with three leeches, and blistered on both temples ;

which

which further alleviated the pain, and considerably lessened the redness of the eye. The tincture was repeated daily, with similar good effects, for a fortnight; when he was able to attend his duty at the warehouse. He now complained, that his principal difficulty was to separate the lids in the morning, which always gave him great pain. It had been observed, for several days, that their edges were more red than natural; but his constant amendment gave reason to hope, that the tincture alone would have been sufficient to remove it. On a minute examination, the edges were found not only to be red, but to have several small white points upon them, truly ulcerated; for the cure of which, the use of the Citrine Ointment, White Cerate, &c. was directed, as in the former cases. From these applications, the eyelids received as much benefit, as the eyes had before experienced from the tincture; and, after three weeks regular use of them, he appeared so well, as to require no further help;

help: but, on a sudden, he caught a fresh cold, which renewed the inflammation in its former degree of violence. He was again bled, and blistered on the temples; and the tincture was repeated; by which he was equally relieved as before. When the irritation was, in some degree, abated, the Citrine Ointment was also applied again, and with good effect: and finding, on enquiry, that he had been always subject to scorbutic eruptions, in different parts of the body, an alterative electuary was prescribed, with the free use of Sydenham water, both alone, and when made with milk into a whey. He was just recovered from this relapse, when the inflammation again returned, without any visible cause, and was attended with equal pain, as at the first. The same means were repeated, and an issue was opened in his arm, which soon discharged freely. In three weeks from the last attack, his eyes were once more recovered to a state of health; since which he has had no relapse

relapse of a similar kind; but, at this time, enjoys his sight clear and perfect.

C A S E XVI.

The foreman of one of the principal pewterers in the city had been subject for several years, to a weakness of sight, and frequent foreness on the edges of the lids; which strongly adhered to each other, and gave great pain in the separation, when he awoke in the morning. In the month of June 1778, this foreness became so troublesome, as to determine him on asking Mr. Wathen's advice. The case answered exactly to the description of the Pforophthalmy; and the Citrine Ointment, and White Cerate, were directed and applied: but, the first trial of the ointment, (which was made use of too freely) gave him so much pain, that he could not be persuaded to repeat it; notwithstanding which, from this time,

time, his eyelids began to mend; and, in three weeks, by the use of the Cerate alone, he was apparently cured. He continued well a month; at the end of which, the same complaint returned, though in a less degree than before. He was again urged, and with difficulty persuaded, to use the Citrine Ointment, in a more cautious manner, so as not to touch the globe of the eye. It gave much less pain; and, in a few days, the complaint was entirely removed. Some weeks after this, he had another relapse, and was relieved as speedily, by the same application. Since this time, he has had no return of any consequence; and, as soon as he perceives the least tendency to it, he recurs to the ointment, which is always sufficient to remove it.

CASE

C A S E XVII.

In October 1777, the son of a merchant in the city, about twelve years of age, was seized with an inflammation in the left eye, which would not suffer him to make the least use of it, without great pain. A variety of topical applications, and internal medicines, were tried, without any effect : and, at the end of a month, he was brought home, and put under the care of the family physician, who prescribed for him, another month, with no better success. Mr. Wathen was then consulted, who found the eyelids much swelled, and the eye exceedingly inflamed. The Thebaic Tincture was proposed, and immediately applied ; and the same evening he was bled with three leeches, and blistered on the temple. The day following, the pain and irritation were so much abated, that he could bear the light,

and

and look at objects with a degree of steadiness, of which he had been incapable from the first attack. This gave an opportunity of discovering a small speck upon the Cornea; and also, that the edges of the lids were very red and sore. The lids, however, were too much swelled, and the inflammation of the eye was too considerable, to allow the application of the Citrine Ointment; but the White Cerate, and mixture of new butter and milk, were used, as in other cases: and, in the space of a week, the irritation was so far gone off, that the Citrine, also, could be applied, without increasing the pain. After this, the White Cerate was laid aside, on account of the swelling in the eyelids; and in place of it, was substituted a cataplasm, made with alum curds, and hog's lard; which proved very useful, as a mild astringent. By the use of these means, the patient was entirely cured, in a few weeks, of both disorders; and has had no relapse from that time to the present.

Several

Several of the Submaxillary glands had been observed to be enlarged, for a long time before the inflammation of the eyes came on. These swellings continued after the Ophthalmia was removed; and, in the July following, two of them were increased to a considerable size. One, being fully matured, was opened with a lancet; the other was extremely hard, and as big as a common walnut. As soon as the former was brought into a healing state, the young gentleman was sent into the country; with directions to take half a drachm of the *Æthiops Vegetabilis*, night and morning; and half a pint of sea water twice a week. The wound gradually healed; the indurated gland softened; and both were perfectly cured within the space of two months; during which, neither the eye, nor eyelids, had the smallest tendency to a relapse.

C A S E XVIII.

An apprentice to a mathematical instrument-maker in the city, about seventeen years of age, having had the small-pox when he was only two years old, was, since that time, subject to frequent, and almost continual complaints on the edges of his eyelids. They were red, sore, and adhesive; and an inflammation sometimes extended from them to the eyes, and continued upon them for months together; depriving him of sight, and disabling him from attending his school, when he was a child, or his business, after he was an apprentice. The inflammations had left specks in both eyes, which occasioned, in a greater or less degree, a constant obscurity in the sight. Great quantities of medicine had been taken; and various eye-waters, ointments, &c. had been used, without any effect. Towards the end of August 1777,

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after

after undergoing much pain for some time, he was advised, by me, to use the Citrine Ointment and White Cerate. On the third day of using them, I found that the edges of the lids were much softened; they were more easy, and adhered less together when he awoke in the morning. His body was kept gently open with an alterative electuary, and the Thebaic Tincture was applied a few times, at the beginning, on account of the redness, which extended to the globe of the eye. By these means he gradually mended; and, by the middle of September, his complaint was entirely removed. The sublimate eyewater was, however, continued, on account of the specks. More than two years are elapsed since the cure, and he continues perfectly well, having never had the slightest relapse. The specks are with difficulty distinguished from the other part of the Cornea.

CASE

C A S E XIX.

A young gentleman in the city had been subject, for many years, to a soreness and inflammation, both on the eyes and eyelids. This disorder first came upon him while he was at boarding-school, and was imputed to his binding a wet handkerchief, instead of a night-cap, round his head. A severe cold in the head, and inflammation in the eyes, immediately followed; the former of which was removed without trouble, but the latter confined him a long time, and totally prevented him from applying to his books. From this time, he was seldom wholly free from it; and had been under the care of many of the faculty, who tried the use both of externals and internals, without any success. In September, 1778, this complaint attacked him with the greatest violence, and continued three weeks, without

any alleviation. The eyelids were much swelled, and extremely red and sore at their edges; and upon the Cornea of each eye, was a small speck, which impeded the sight on the side on which it lay. The lids adhered so much to each other in the morning, that he could not separate them for some minutes; nor then without great pain. In this state I found him: when I immediately directed the use of the Citrine Ointment, White Cerate, &c. The application of the ointment gave him no pain; and after only twice using it, he felt himself considerably relieved, and every appearance was favourable, to a degree much exceeding what could have been expected in so short a time. A decoction of the Bark, and a weak solution of Sublimate, were given internally; which, with the externals, he continued for a month, and was then so well recovered, that the ointment was omitted, and only the Sublimate eye-water for the specks was used. Since that time, he has been able regularly to pursue his business; and has had no relapse

relapse that has given him much trouble or uneasiness. Immediately as any thing of the kind appears, he makes use of the Citrine Ointment, which at once prevents its progress.

CASE XX.

Mrs. P. a lady in the city, five years since, was seized with a foreness upon the edges of the right eyelids, which gave her great pain, and frequently inflamed the eye. Various internal medicines were administered, with some externals, by an apothecary, who supposed it to proceed from a scorbutic acrimony in the constitution: but, after a considerable time had elapsed, without any amendment, a physician was consulted, who prescribed other medicines, with a similar intention, but with no better effect. She afterwards went to Rochester, and put herself under the care of a woman, who is much celebrated, in that place, for curing obsti-

nate complaints of this nature. This person used different topical applications, without affording any relief; and the patient, after a trial of two months, came away worse than she went. Both eyes were now so bad, that she was obliged, for several months, to sit in a room totally dark. During this time, she made trial of various remedies, both external and internal; some of which were recommended by her friends, and others by the faculty. Notwithstanding these, however, the soreness of the eyelids increased, the excoriation spread low toward the cheek, and the pain was without intermission. A perpetual blister had been put on her back, an issue made in her arm, and leaches repeatedly applied to the temples. A surgeon of reputation was consulted; who, after a long attendance, declared himself unable to do her service, unless she would submit to have a seton in the neck; which she refused. About a year and a half from the commencement of her disorder, Mr. Wathen proposed
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the Citrine Ointment, &c. to be used, in the manner before directed. The extreme foreness of the lids caused the first application to give more than common pain: it was, however, regularly repeated; and, at the end of a week, the lids assumed a more favourable aspect, and the eyes began to bear the light. As the lids mended, the pain from the application abated, and, in a short time, wholly ceased. Their adhesions to each other became daily less; and, in six weeks, the foreness was entirely gone off, and they returned to their natural appearance. Her eyes now look as well as if they had never been disordered, and her sight is, in common, equally good; though, at times, she has found a degree of tenderness in the lids, which has called for the use of the ointment, and she has always been immediately relieved by it.

C A S E XXI.

Mr. K. of Duke-Street, Spital-Fields, who is now about fifty years of age, applied to Mr. Wathen ten years ago, with a disorder in the eyelids of both eyes, which had not only ulcerated their edges, but caused them to swell very considerably ; and the inside of the lower ones was turned wholly outward. He had laboured under this complaint three years, during the greater part of which time, he had been totally disabled from any business. For hours after he awoke in the morning, he was obliged to keep his eyelids close, on account of their adhesion ; and when he attempted to separate them, they would sometimes bleed, and give him extreme pain. Various medicines and externals had been tried, without any effect. Mr. Wathen directed the same applications, as were used in the last case. The Citrine Ointment caused a
great

great smarting, when first applied; but, after three days, the patient was able to open his eyes, with a degree of ease, to which, from his first seizure, he had been a stranger. His amendment was slow, but progressive; and, at the end of two months, the eyelids were restored to their proper state, and natural appearance; and the patient has enjoyed a full and perfect sight from that time to the present.

Of the Purulent Eyes of New-born Children.

THE Tunica Conjunctiva is defended from the acrimony of the tears, by a soft thin mucous fluid, which is supposed to exhale from innumerable small perforations, dispersed, according to Winflow, all over its surface. This fluid, as it naturally exists, is very small in quantity; on which account, as it is pellucid, it is undiscernible by the naked eye: nevertheless, it is liable, by an irritation or inflammation of the parts which furnish it, not only to be increased greatly in quantity, but to be so altered and changed in quality, as very much to resemble pus itself, both in consistence and colour. Such, I suppose, was the state of St. Yves's patient, which has before been considered

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(Page 19); and which he, in my opinion, attributed, erroneously, to the Metastasis of a recent venereal virus. To this case, of a purulent eye in an adult, a few others might be added: nevertheless, I cannot but observe, that such instances are very rarely to be found; nor, in common, is the disorder, in patients of this class, altogether the same as in newborn children.

In the latter, it first discovers itself by a redness in the eyelids, which quickly swell to a size so large, as to prevent their being separated, without the utmost difficulty; after which, a constant discharge of thick yellow matter soon succeeds; which, if the lids can be separated, will appear to spread over the eye, so as entirely to cover it. In common, both eyes are affected nearly in the same manner: and, in bad cases, whenever the child cries, the inside of the lids is turned outward; which is also the case, whenever an attempt is made to separate them with the fingers. This is some-

sometimes the constant state of the lids ; and though they are restored, by the fingers, to their proper situation, yet, on being left to themselves, they immediately return to their former inverted state.

The purulent eye is usually unconnected with any other disorder, and is supposed to arise from the child's being imprudently exposed to the cold air : but it is occasionally accompanied with eruptions on the head, and other parts of the body ; and I have, more than once, seen it attended with evident signs of a scrophulous constitution.

The swelling of the eyelids, necessarily occasions a tightness, or constriction, of their ciliary edges ; by means of which, the matter which is formed on the inside of them, is prevented from wholly running off : and its continuing between the lids and the globe, serves still further to increase the inflammation ; and is, also, the frequent cause of ulcers and specks, which very often partially, and sometimes totally, cover the pupil. These effects

effects may, in a great measure, be produced by the acrimony of the matter: but even allowing, that the retained fluid is perfectly bland and mild, its continual lodgment on the eye is sufficient, by maceration only, to destroy the transparency of the Cornea; and when it has been joined with the pressure of the swollen eyelids, it has been known to cause the Cornea to BURST; the humours to be partially or wholly discharged; and the eye, of course, to sink in the orbit.

The cure of a disorder, which is known to be attended with such hazardous, and even fatal consequences, to the eye, is an object of no small importance: and yet it is undeniably true, that the common methods which have been used, have, for the most part, been found insufficient for this salutary end. Without enlarging upon them, I shall proceed to lay before the reader, the description of a method that I have found, in a great number of instances, to give speedy relief.

An increased exhalation from the minute pores of the Conjunctiva, seems to constitute the first stage of the complaint; and, in this early period, the indication, without doubt, is to constrict the relaxed vessels, and check their increased discharge: nor is this intention less proper, when the quantity of the discharge is increased, and when it is changed to a purulent appearance; or even, when it is become quite yellow, and accompanied with so high a degree of acrimony, as to erode and rupture the Cornea. That my meaning may not, however, be mistaken, it is necessary to observe, that though the words, matter and purulency, have frequently occurred on this subject, they never were meant to imply the actual existence of pus; but were used as analagous words, the best fitted that could be found, to express that similar discharge which takes place in this disorder. For here, as in the Gonorrhœa, and some affections of the Sniderian, and other membranes, these epithets are continually

used, to express the quality of their augmented excretions; whereas, no ulcers are supposed to exist in those cases, and, consequently, no real pus can be formed. The case, therefore, being rightly understood (that the discharge from the eye is not real pus, but only mucous, increased in quantity, and altered in colour, by some irritating cause), the application of astringents, in every state and degree of the disorder, will appear to be as reasonable, as it has been found to be successful. The medicine which I have used for this purpose, and which, from my experience of its great utility, I would strongly recommend to the public attention, is the Aqua Camphorata of Bates's Dispensatory; the composition of which is as follows:

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Vitriol. Roman.

Bol. Armen. āā ℥jv.

Camphor. ℥j. m. f. pulvis,
de quo projice ℥j. in aquæ bullientis ℔bjv.
amove ab igne et subsident fæces.

Upon

Upon the slightest view of the ingredients that compose this medicine, it must be evident, that it possesses a strong styptic quality ; on which its great efficacy, in this disorder, chiefly depends. It is, however, much too strong for use, before it is diluted ; and the degree of its dilution must always be determined by the peculiar circumstances of each case : nevertheless, I may venture to recommend about one drachm of it to be mixed with two ounces of cold clear water, as a medium or standard, to be increased or diminished, as occasion may require.

It must also be evident, from the preceding description of the purulent eye, that neither this, nor any other medicated fluid, can be well applied to the affected part by means of a steam, fatus, cataplasm, or drops : but, that it requires some small degree of force to send the liquor, between the swelled Conjunctiva which lines the eyelids, and that part of it which covers the globe of the eye. This cannot be better effected than by

the use of a small ivory or pewter syringe, terminating in a blunt pointed cone. The extremity of the syringe is to be placed between the edges of the eyelids, in such a manner, that the medicated liquor may be carried over the whole surface of the eye; by means of which, the retained matter will be entirely cleared away, and enough of the styptic power of the medicine left behind, to interrupt and diminish the excessive discharge.

It should be remembered, that the quantity of matter, collected under the lids, varies much in different cases; and that, in bad ones, it is formed with amazing rapidity. According to this variation, the strength of the medicine, and the frequency of repeating it, must always be regulated. In the mild or incipient state, it may be sufficient to use it once or twice a day, and somewhat weaker than the standard: but, in the worst and most malignant species, it becomes necessary to repeat it once or twice

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every

every hour, and to increase its stypticity in the same proportion; and when the disorder is, in some degree, subdued, the strength of the medicine, and frequency of repeating it, may both be decreased.

The reasons for a frequent repetition of the means just mentioned, in bad cases, are, indeed, of the most urgent nature. Until the Conjunctiva is somewhat thinned, and the quantity of the discharge diminished, it is impossible to know, in what state the eye is; whether it is more or less injured, totally lost, or capable of any relief. The continuance or extinction of the sight, frequently depends on the space of a few hours: nor can we be relieved from the greatest uncertainty in these respects, until the Cornea becomes visible.

During the swelling of the eyelids, emollient cataplasms have been recommended in books, and are very commonly used; but they are immediately opposite in their nature to the method of cure here laid down: and, in the cases which
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I have seen, after they had been used, I never could observe the least benefit to be derived from them. On the contrary, I am of opinion, they increased the relaxation of the parts; and, in that way, became an additional cause to keep up and increase the morbid humour.

Those cases, particularly, in which the inner parts of the eyelids are turned outward, appear to be caused by the extreme relaxation, and swelling of the Tunica Conjunctiva. This membrane being forced outward by the child's crying, or by any other means, is prevented from returning to its natural situation, by the cartilage called Tarsus; which, preserving its natural strength and elasticity, acts as a tight band to keep it out. Now, to add to this swelling and relaxation of the Conjunctiva, by emollient applications in any form, must, surely, be opposite to every reasonable attempt that can be made for the cure.

Instead of cataplasms of this nature, whenever such kinds of applications are

thought necessary, they, also, as well as the lotion, should have a tonic, or mild astringent property; and I would particularly recommend one, that is made of the curds of milk, turned with alum, and an equal part of Unguentum Sambuci, or Axungia Porcini. I have found this to be highly useful. It should be applied cold, and frequently repeated, without intermitting the use of the injection.

It sometimes happens, that the matter formed between the lids is of a glutinous and adhesive nature, causing the eyelashes to stick to each other, after they have been closed for any length of time. In this case, after the cataplasm above mentioned is removed, and before the lotion is injected, it will be proper to wash off the adhesive matter, with a little fresh butter dissolved in warm milk, or with some other soft oleaginous liquor.

The eversion of the lids has so disagreeable an appearance, that it greatly alarms those

those who are unacquainted with the disorder; particularly, as is sometimes the case, when it is continual. If it takes place only when the child cries, and disappears as soon as the crying ceases, nothing more need be done, than to use the applications above recommended; and as the swelling of the Conjunctiva abates, this symptom will likewise go off: but, if the eversion is constant, it will be necessary to repeat the injection oftener than in other cases, and to employ a person, immediately after the use of it, to return the lids, and to keep a compress, dipt in the diluted Aqua Camphorata, constantly upon them, with his finger; in order that the habit may be removed, and the lids may recover their proper tone and strength.

Where the swelling and inflammation have been considerable, I have sometimes found it necessary to take blood from the temples. In those very young subjects, who are most commonly affected by this disorder, one leach applied to

each temple seems fully sufficient to answer the purpose; immediately after the use of which, I have, in general, directed a small blister to be applied on the same part.

Internals of the absorbent and laxative kind should also be given, to keep the body cool and open; such as Rhubarb, Magnesia, Manna, &c.: and, if there is reason to suppose any particular humour in the habit, gentle alteratives should be added; such as the *Æthiops Mineralis*, or small doses of *Mercurius Dulcis*.

In cases where the inside of the eyelids has been much inflamed, I have occasionally applied, with good effect, the Thebaic Tincture, as recommended in the chapter on the Ophthalmy.

C A S E XXII.

A child of Mr. Y. in Earl-Street, Seven-Dials, was seized, when three days old, with a sudden swelling of both eyelids, attended with a great discharge of matter, which continued a month, without the least abatement. For a time, nothing more was done, than washing their outside with rose-water and tutty, squeezed through a sponge. This being found insufficient, the parents brought the child for advice. I immediately washed off the matter retained on the globe, with the Aqua Camphorata, properly diluted, and injected through a syringe; and directed the repetition of the same every hour. In a day's time, the swelling and discharge evidently abated; and the same applications being continued, with the occasional use of Rhubarb and Magnesia, to keep the child's body open, the eyes were compleatly cured in less than three weeks.

C A S E XXIII.

The eyelids of a child of Mr. J. in Great-Eastcheap, on the 9th day from its birth, began to swell; and on the 10th discharged a great quantity of matter. The apothecary of the family immediately applied a large blister to the back; and a lotion and ointment were used to wash and anoint the outside of the lids. The blister discharged freely; and, for short intervals, the appearances were very promising; but not continuing, two more blisters were applied behind the ears; which produced no more lasting benefit than the first. At the end of five weeks, the disorder was as violent as ever. Mr. Wathen was then called in, by whose direction the diluted Aqua Camphorata was injected, and repeated every hour. The same night, the child opened its eyelids, which it had not been able to do since the first appearance of the disorder; but several days elapsed, before

before the eyes could be distinguished; the child shutting them, as a defence against the light, and the lids becoming everted on every attempt to separate them with the finger. When they were first seen, the Cornea of both appeared to be entirely clouded over, and a small white spot was perceived on each. The same treatment was continued a month; towards the close of which, one drop of the Thebaic Tincture was dropped into the eye every day. The discharge, at the end of this time, entirely ceased; the eyes acquired their natural clearness; and the specks gradually lessened, and soon became transparent.

CASE

C A S E XXIV.

A child of Mr. S. in Thames-Street, was seized, like the former, when about a week old, with a considerable swelling of the eyelids, attended with a great discharge of matter. After three days, instead of matter, pure blood continually issued out. Fomentations and ointments were carefully applied, for a week, by advice of an apothecary; who, finding no amendment in that time, gave it as his opinion, that the eyes were lost; and desired other assistance might be called in. I proposed the diluted Aqua Camphorata, and immediately injected it. It was repeated every hour; and, the next day, the hæmorrhage ceased; but was followed with a return of the matter, which continued to discharge in a great quantity. The same lotion was regularly injected; the body was kept constantly open with Magnesia; and the discharge from two
large

large blisters, which had been put behind the ears, was preserved by the use of the Epispastic Ointment. At the end of three weeks, the discharge ceased, and the eyes were apparently well: but, from the child's taking a fresh cold, or from some unknown cause, the disorder returned with much violence, and obliged me to repeat the same medicine a fortnight longer; when the eyes were perfectly recovered.

C A S E XXV.

The child of Mr. H. in Houndsditch, four days after its birth, was attacked with a swelling of the left eyelids, which rapidly increased, till it became of the size of a large walnut: the right eyelids were also swelled in a smaller degree; and, the day following, a very large quantity of matter was discharged from between both of them. When the left eyelids were separated from each other,

the appearance very much resembled a deep wound filled with matter. By advice of the midwife, a mixture of parsley and hog's-lard was first applied; but the child continuing to be in extreme pain, it was soon changed for a poultice of bread and milk. After this, they were fomented with a decoction of poppy heads; and a large blister was applied to the back. The discharge, notwithstanding, continued very profuse, from both eyes; and, at the end of a fortnight, the upper lid of the left eye became everted, whenever the child cried; but returned to its natural state, when the crying ceased. At first, the eversion was only of a small part of the lid; but afterwards became entire. The Tunica Conjunctiva, which lined its inside, was very much swelled, and appeared of a deep red colour. In a short time, the eversion became more obstinate and constant, so as to continue through the day; and much resembled (as Mr. Warner has expressed it), an inverted *Intestinum Rectum*.

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In this state of the disorder, I applied the diluted Aqua Camphorata, as in the former cases, ordering a repetition of it every hour ; and particularly recommending, that, at each washing, the matter might be entirely cleared away. A poultice, made with the alum curds and hog's-lard, was applied to the lids at bedtime ; and the child took a table spoonful of the syrup of poppies, which procured him a few hours rest. The discharge soon became less, but the eversion continued ; on which account, the lid was returned with the finger, and graduated compresses, dipt in the camphorated lotion, were applied over it, so as to make a constant gentle pressure. The compresses did not succeed as I could wish, and the eversion often took place notwithstanding their application ; a finger was, therefore, directed to be kept continually on the lid, until its restoration should be accomplished. The child was bled with two leaches, and blistered on each temple ; gentle purges

were frequently administered; and the Thebaic Tincture was daily dropped into the eye. The finger was kept on the lids, with as few intermissions as possible, for a week; at the end of which, the habit was so far overcome, as not to be constant, though it still happened, whenever the child cried. The camphorated lotion being regularly continued, the discharge gradually abated; and, at the end of two months, the swelling, discharge, and everſion were entirely cured, and the eyes became perfectly ſound and clear.

The utility of the means recommended is, I think, ſufficiently proved by the caſes above recited. At the ſame time, I am free to acknowledge, that I have not always met with the ſame ſucceſs: but, to do juſtice to the propoſed remedies, I muſt add, that when I have found them fail, the diſorder had been ſuffered to acquire conſiderable ſtrength by delay; and, in all thoſe inſtances, I think it highly probable, that an early application would
have

have been no less effectual than in the cases I have related. The want of success, therefore, in the exceptions made, does, in fact, prove nothing more than the great danger of delay.

Though the three disorders which have been the subjects of the preceding pages, are distinct in themselves, and required a separate description, in order to their being rightly understood, and properly treated: it is, nevertheless, equally true, that they are often so combined with each other, as to prevent the possibility of distinguishing, at first sight, which of them was the original complaint. For instance, the Ophthalmia is often occasioned by the Psorophthalmia: but, before the advice of the faculty is taken, it is commonly found, that the Ophthalmia predominates in so considerable a degree, as to prevent an accurate inspection of the ciliary glands, and, of course, any certain knowledge of the existence of the Psorophthalmia. This, however,

however, is of no great consequence; since the inflammation of the eye, though not the original, is the principal complaint, and requires the primary and more immediate attention: and, when the violence of the Ophthalmy is abated, the disorder of the lids will become more evident, and direct to a particular, and more suitable treatment; without which, it will be found very difficult, if not impossible, to compleat the cure. Again, in cases of the purulent eye, the inflammation will often be found very considerable, and require, not only the use of the means pointed out in treating on that subject, but also those others which have been prescribed for the cure of the Ophthalmy. In what I have above said, my only design is, to suggest a reason for the occasional use of the Thebaic Tincture, leaches, blisters, &c. in those cases that are classed under the title of the Pforophthalmy, and Purulent Eye.

Case

*Case of a Gutta Serena cured by
the Use of Electricity.*

THE use of Electricity, for the cure of obstinate disorders, has long been practised : but, at the same time, it will hardly be denied, that the application has, for the most part, been made by persons who were very little acquainted, either with the texture of the human frame, or the disorders to which it was subject ; and who, indeed, had no other knowledge even of electricity itself, but what they derived from a few common experiments. In such hands, no considerable improvement was to be expected. Yet, the most eminent of the faculty have ever considered the electric fire, by means of the wonderful properties, of its subtilty and activity, as capable of being rendered extremely serviceable, under many complaints to which the human body is subject ; particularly, in cases of obstruc-

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tion

tion and relaxation ; by acting as a deobstruent in the former, and as a stimulus in the latter. Practitioners of this class will candidly receive any information, that may tend to clear or enlarge the view of this interesting subject ; or to establish the utility of so simple, and easy an application.

With this design, I have inserted the following case, which is a remarkable proof of its efficacy in an incipient Gutta Serena.

Sufannah Moody, about 17 years of age, servant to Mr. Baurie, in Spitalfields, on the 29th of January 1780, was seized with a pain in her teeth and jaw, which, two days after, produced a considerable swelling in the face. These symptoms, however, went off in a very short time : but they were no sooner gone, than she found she was unable to open the left eyelids ; and the following day, the right lids also were affected in the same manner. An apothecary was then consulted. He, supposing that an adhesion was produced by gum sticking between the edges of the lids, recommended an ointment to
soften

soften it: but, as this had no effect, he separated the lids with his fingers; when he was much surprized to find, that the sight, of both eyes, was entirely lost. In this situation I first saw her. There was no apparent inflammation in either eye; the Pupils of both were very much enlarged; and the Iris had but a very small degree of contraction. I applied the Thebaic Tincture, hoping that the stimulus which it usually gives, might excite the optic nerve to its proper action. The next day Mr. Wathen saw her; when the eyes continued exactly in the same state, as they were in the preceding. He advised, that the tincture should be applied again; that she should be blooded with three leaches, and blistered on both temples. The weather was so cold, that no leaches could be procured. She was, therefore, cupped on both temples, and three ounces of blood taken away; after which, a blister was applied to each temple, and two others behind the ears. These applications seemed to be altogether without effect. She was still unable to open the lids; and when

they were separated by the fingers, she had not the least degree of sight in either eye. February 7th, with Mr. Wathen's consent, I electrified the left eye for a quarter of an hour : first, by carrying a stream of the electric fire through the eye ; and, afterwards, by drawing sparks from all the parts which surrounded it. That evening, she perceived no alteration ; but the next morning she could open the left eyelids with ease, and distinguish clearly all the objects which surrounded her. The benefit did not, however, at all extend to the right eye or lids. I therefore electrified this eye, exactly in the same manner, and for the same length of time, as I had done the other. The consequence was, that, on the next day, the patient had so far the use of the right eye, as to be capable of distinguishing large objects ; though not with the same clearness, as she did with the left. That night she complained that her head felt very heavy. February 9th, I passed a stream of the electric fire through both eyes, and drew sparks from them ; which I also accompanied with the appli-

cation of small shocks through the head in different directions. The application gave her more pain than it had done before; but succeeded in the happiest manner: for, on the following day, she opened both eyes with perfect ease, and saw very distinctly. I thought it unnecessary to electrify her again, or to do any thing more, than order an opening medicine; which entirely removed the heaviness she complained of in the head; and her sight was perfectly restored.

I have only to remark on the above cure, which was compleated by only three electric applications, that it differs from those related by Mr. Hey*, in the following material circumstances:—the disorder came on more suddenly, than in the cases described by that author—the blindness was more entire—the eyelids were more affected—and the cure more speedy.

* See 5th Vol. of Lond. Med. Obs.

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 different directions. The application gave
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 with perfect ease and was very lively.
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