Mode of managing Ocular Inflammations;
By Dr. WHYTE.

THAT expoſure of the naked eye to the intenſe heat and vivid rays of a nearly vertical ſun, ſhould in ſome caſes occaſion an expanſion of the humours and dilatation of the veſſels of that delicate organ, is in the nature of things not to be doubted.

Where the conſtitution is naturally delicate, where it has been formed in another climate, and is not yet ſufficiently aſſimilated to the new one, ſuch expanſion and dilatation will, on the requiſite expoſure, more certainly enſue.

To guard againſt ſuch expoſure conſtitutes therefore a material part of ocular prophylaxis. It is to be effected by ſhading the eyes from the influence of the vertical ray, by means of broad brimmed hats, long vizored helmets, or what would anſwer beſt of all, the tamata of Taheite, a garland compoſed of palm leaves with a plated projecting front piece; this of all coiffures is the moſt eminently ſuitable, becauſe it does not debilitate the head by exceſſive heat, as do the ponderous helmets of European ſoldiers, or the equally ponderous turbans of pious Muſſelmen.

Neither the cocked hat of modern Europe, nor the mouchoir ſo generally worn by the lower claſſes of the French and Spaniards, as well at home as in their American poſſeſſions; nor the turban of the ſwarthy inhabitants of Africa or Aſia, afford any ſhade or protection to the eyes.

Accordingly, all thoſe enumerated claſſes, in every variety of climate and ſoil, are exceedingly liable to ocular inflammations, and to their remote conſequences, ſpecks and cataracts.

In ſome of thoſe countries too, the influence of the ſolar ray is much increaſed by inhabiting a houſe having white-waſhed walls, or where the eye of luxury is dazzled and deſtroyed by the luſtre of elegant but ſuperfluous chandeliers, or by the reflexion from a multiplicity of ſplendid mirrors. Where ſuch cauſes have alone operated, and application has been made for medical aſſiſtance in the firſt ſtage of the diſeaſe, it is for the phyſician or ſurgeon to determine whether the diſeaſe he is about to treat conſiſts in a mere dilatation of the humours, or in an inflammation of the tunics, or whether it is a mixed caſe, and both circumſtances are combined.

In the firſt ſpecies there is frequently no perceptible inflammation; but, by an enlargement of the aqueous humour, and the anterior ſection of the orbit, the focus of concentration falls behind the retina. An indiſtinct image is formed upon it

even in day-light, while towards evening the lucid rays proving ſcanty and feeble, ſeem blended and confuſed, and viſion is completely interrupted.

I am acquainted at preſent with a caſe of this kind, which was induced by the patient indulging himſelf with an afternoon's nap, in the open air, on the rock of Gibraltar, laying on his back, and with his eye-lids conſiderably open.

That this imprudent expoſure did not at the ſame time occaſion an inflammation of the blood veſſels that ramify and run along the ſurface of the tunica albuginea, depended on the abſolute tone and ſtrength of thoſe veſſels, and on their being relatively ſtronger, and leſs expanſible, than the ſubjacent tunics or contained humors.

This man recovered without having had recourſe to medical aſſiſtance.

By avoiding for ſome time the ſtimulus of light, or, more correctly ſpeaking, the expanſive power of heat, the humors inſenſibly collapſed, and the tunics reſumed their original and healthy tone.

Had this perſon, however, been a patient of mine, I would have aſſiſted the ſlow progreſs of Nature, by keeping the ball of the eye conſtantly moiſtened with a cloth or rag dipped in cold water, or ſome gently aſtringent collyrium, as aqua litharg. acetati, aqua zinci, vitriolati, &c.

I would have alſo touched the ball of the eye, morning and evening, or oftener, with ſome aſtringent and ſtimulating tincture, as that of cinchona, or of opium; or, to ſuperſede every other remedy, and ſtrike at once to the root of the diſeaſe, I would have pierced through the tunics with a couching needle, and entering the poſterior chamber of the aqueous humor by an inciſion parallel to and behind the iris, permitted an outlet proportioned to the exiſting expanſion.

No danger need be apprehended from this operation; it is even in this manner I am accuſtomed to extract the cataract. It is a mode that poſſeſſes many advantages. I have performed it frequently, ever with impunity, and often with ſucceſs.

When, from the operation of light and heat alone, the veſſels of the tunica albuginea have alone ſuffered, a ſteady and conſtant employment of collyria, in the extenſive manner recommended, with the diurnal or more frequent application of ſome ſtimulating tincture, will in moſt caſes, where the eye labours under no conſtitutional diſeaſe, and we have been conſulted at an early period, effect in very few days a complete cure, while avoiding of the exciting cauſe will ſecure againſt relapſe.

The momentary pain ariſing from the application of the ſtimulating tincture is often exceedingly acute, yet ſo ſenſible are

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thoſe who have once experienced it, of its great utility, that the moment I enter ſome ſhips where, from incorrigible negligence in not wearing hats or bonnets, this diſeaſe is exceedingly frequent, I am ſurrounded by a circle of ſoldiers' wives and children entreating to be touched.

I may likewiſe add, that when leeches can be procured we ſhould do well to apply them in ſome caſes, repeating them as circumſtances may require, and applying them as near as poſſible to the ſeat of the diſeaſe.

In ſuch caſes, when leeches cannot be obtained, we may open the jugular vein, or, ſtill better, the temporal artery.

In ſevere caſes I have ſometimes ſcarified inflamed eyes, but after ſcarification ecchymoſis often accedes, and the eye may remain blood-ſhot, a diſagreeable circumſtance, for weeks together.

Beſides, the application of ſtimulating tincture and aſtringent collyria has proved, in my practice, ſo invariably beneficial as to ſuperſede, in my opinion, every other mode of treatment.

If I heſitate to deform the eye by ſcarifications, the moſt indiſpenſible neceſſity could alone determine me to disfigure the face by diſagreeable and diſguſting veſicatories.

Sometimes, when from the extreme ſenſibility of the viſual organ, and its vicinity to the primum mobile, the primum mobile itſelf is affected, I am taught by the common rules of prudence to obviate danger, and afford relief by an immediate diminution of the circulating maſs, moderate or copious, and repeated or not, according to the urgency of exiſting circumſtances.

It is almoſt unneceſſary to add, that the ſtate of the bowels muſt be likewiſe attended to.

So much for thoſe inflammations of the eyes that originate from improper expoſure to heat and light alone.

The inflammations ſo frequent in Syria and Egypt have often another and more pernicious ſource.

By means of proper coiffures we can protect the moſt tender of organs from the meridian rays of a ſcorching ſun; but what human invention, what undiſcovered amulet, can ſecure the eye of him who inhabits a wilderneſs of ſand, from the intruſion of its minute and inſinuating particles, when that wilderneſs is, like the waters of the ocean, agitated by the winds?

Of one thing however we may reſt aſſured, that till the irritating particles are fairly expelled, totally diſſolved, or completely encyſted, no mode of treatment can operate a cure.

Nature, ſtudious for the ſafety of all her productions, has been eminently provident of this the moſt exquiſite and beautiful of all her works. She has formed the eye-lids to ſecure

the included orbs againſt the impulſe of foreign bodies; and the tears, ſecreted for the purpoſe of moiſtening the eye, and maintaining it in a condition ſuitable to the performance of its peculiar functions, are on the ſmalleſt irritation from a foreign body, ſecreted in increaſed quantity, and aſſiſt in the ſolution or expulſion of ſo dangerous an inmate.

It is the buſineſs of the philoſophical practitioner to ſecond the efforts of Nature, and endeavour to improve upon her curative indications.

In ſome countries it is a common practice among the peaſants to attempt the removal of motes in the eye by wiping the ball gently with a feather, or employing a damſel to ſkim it with her tongue; but both modes are rude, and frequently ineffectual. It is more proper, in my opinion, to tread in the footſteps of Nature, and endeavour to cleanſe the eye by copious ablution, by a forcible and well directed ſtream, which pervading every receſs, ſhall in its progreſs ſweep every foreign particle before it. Accordingly, in ocular inflammations ariſing from this ſource, or where ſuch a ſource is at all ſuſpected, I enjoin the eye to be inſtantly ſyringed.

Not unfrequently the patient is ſenſible of the expulſion of the irritating particle during the operation. Sometimes, however, it only ſhifts its ſeat, and one or more repetitions are required. In every other reſpect the inflammation is to be treated as if proceeding from the influence of heat and light alone.

Should any gentleman do me the honour to make trial of the methods I have here recommended, I flatter myſelf he will find his account in it, and neither have occaſion to accuſe me of preſumption, nor himſelf of temerity.

Poſtſcript to Dr. WHYTE*'s Paper on Ocular Inflammations.*

SINCE writing the preceding account of my mode of treating ocular diſeaſes, I begin to think better of ſcarification, and to practiſe it oftener.

I have even met with ſeveral caſes where, I apprehend, ſuffuſion would have been the conſequence of its omiſſion.

I have alſo ſeen, ſince writing the original paper, ſome Eſſays on Ophthalmia in the Egyptian Decade, with which I have been favoured by Sir Sidney Smith, and am much ſurpriſed that in the enumeration of remedies by one of their principal phyſicians, ſcarification is not ſo much as mentioned.

It is obſerved indeed by Citizen Bruant, in a different paper, that the natives employ, with much advantage, topical blood-letting at the external canthus, by which, I ſuppoſe, he means ſcarification; but, he adds, that the French could not,

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or had not yet adopted it. Citizen Bruant ſuppoſes that ſome *ophthalmies* proceed from bilious accumulations in the primæ viæ.

If the eye is ſufficiently prediſpoſed, or the fever ſufficiently violent, this may no doubt happen.

This ſpecies, as he chuſes to term it, he treated moſt ſucceſsfully by emetics and purgatives.

General phlebotomy, he ſays, was contra-indicated in this ſecond ſpecies by the preſence of bile; and in the firſt, or local ſpecies, ariſing from duſt, &c. by the debility induced upon the troops by the hardſhips of a nine year's war.

Like preceding medical conjurers, he ſurpriſes us with ſtill a third ſpecies, ariſing, he ſays, from nervous irritability.

The number of different and diſcordant ſubſtances that have been uſefully employed as collyria, demonſtrates to me that they all act upon one common principle, viz. the principle of ſtimulation. Still I cannot place perfect confidence in Dr. Savareſi's obſervations, when he informs us, in one page, that powdered ſulphat of alumine (common alum), invariably produced ophthalmia; and, in a ſubſequent one, that by blowing a powder, compoſed of it, ſugar candy, and nitrated kali (nitre), upon the ball of the eye, he has invariably ſucceeded in the removal of incipient ſpecks.

Savareſi informs us, that of one thouſand patients whom he treated, two only became totally blind, and two loſt an eye.

This was great ſucceſs; and much certainly depended on an early application.

He frequently applied bliſters to the nape of the neck, and always uſed ſtrong ſtimulating collyria.

His cures were, however, exceedingly protracted, being in general from three weeks to two months; and might, I apprehend, have been much ſhortened had he occaſionally ſcarified, as I now do; and had he touched the ball of the eye, once or twice a day, with a hair pencil dipped in ſome ſtimulating tincture.

Although the French have had ſo excellent an opportunity, they do not appear to have acquired a very accurate knowledge of the nature and cauſes of ocular inflammation. In attributing the diſeaſe to this or that ſaline powder, they ought to have reflected that any powder finding admiſſion into the eye, will there produce irritation and pain, and, finally, more or leſs inflammation, till ſuch time as its particles become encyſted, or until they are diſſolved or neutralized, or expelled by the lachrymal ſecretion.

If nitre is found to be leſs irritating than alum, we may preſume it to be more ſoluble. And if any powder is more prejudicial

judicial than another, I believe it to be lime. The Egyptian masons have not the art to avoid its influence, and the French physicians report that most of them are blind. But why contend concerning saline powders, when a single grain of sand, of which there would not appear to be any scarcity in the lower parts of the Egyptian atmosphere, will sufficiently explain the phenomenon; and when, in a thousand other cases, unguarded exposure of the eye to intense solar heat will not only furnish sufficient explanation, but the disease may be often traced to such a source.

Dr. Savaresi talks of sthenic and asthenic ophthalmia; but I disagree with him and many others on this subject; so much so, that I do not even believe there is in existence such a thing as sthenic topical inflammation. There may exist a general increase of vascular action; but I contend that no accumulation can take place in any individual part or organ, unless such part or organ has, constitutionally or incidentally, less strength, or tone, or resistance, absolute or relative, than the other parts where no such accumulation has acceded. If the local predisposing debility, inherent or induced, is sufficiently great, ophthalmia may be excited without any increase of general vascular action. An increase of general vascular action may sometimes be necessary to excite topical inflammation; but the vessels of the part must at the time possess less relative tone, otherwise they would not yield to the distending power. Such local and predisposing debility is produced by no means sooner or so much as by heat. Hence exposure of the eye to the direct influence of the solar rays, will ever predispose to ophthalmia; and, where the predisposition is sufficiently great, the disease will be excited without any ostensible cause, and without any increase of vascular action.

There may be more or less decrease of tone in the inflamed part; a decrease that is recoverable, and one that is not.

That sthenic topical inflammation, properly speaking, does not actually exist, would appear, not only from theoretic reasoning, but is confirmed by the present improved practice of the English surgeon, who applies tonics and astringents to every external part that is inflamed. Could the physician act similarly with internal inflammations, we might entertain some hope of the universal panacea being at last discovered.

The reasoning I have employed is consonant to the established laws of hydrostatics, and to those of the animal œconomy; consequently, topical tonics are indicated in all cases of ophthalmia; and in many, general debilitating powers.

I agree with the French physician, that exposure to nocturnal dews may serve as an exciting cause; and I apprehend I furnish

furniſh a more definite idea of the phenomenon when I ſtate, that, by expoſure to nocturnal cold, the fluids, receding from the major part of the ſuperficies, are forced to concentrate themſelves in that part or organ, internal or external, laboring under the greateſt abſolute or relative debility; — in this caſe, the eye, which it is therefore of much conſequence to ſhade from the ſun. But, in ſhading the eye, I do not conceive that there is an equal neceſſity to have the head covered. It is recorded by an ancient hiſtorian, (Herodotus, I believe) that on the fields where battles had been fought, the head of an Egyptian could be diſtinguiſhed from that of a Parthian. The latter, which had been habitually inveſted with the many-folded tiara, was thin, light, and ſemi-tranſparent. The former had gone bare headed when alive; and his ſkull, hardened and baked in the ſun, was thick, opake, and ponderous. It is, perhaps, on a ſimilar principle that we ought to account for the thick ſkins of the inhabitants of hot climates, particularly Negroes.

Convinced of the impropriety of retaining the head in a perpetual ſtate of perſpiration, a ſtate that renders the ſmalleſt expoſure, by uncovering, extremely hazardous, I have lately, although expoſed the greater part of the day in an unſhaded boat, left off wearing a hat, and ſubſtituted a ſmall *tamatà* of green ſilk to intercept the ſun from my eyes. It is, in my eſtimation, a conſiderable luxury to preſerve the head free of perſpiration; and from the want of a hat, I feel no inconvenience whatever. I have ſtill another, and perhaps more important purpoſe in view by leaving off a hat; which is, to demonſtrate to the world, that the diſeaſe fantaſtically termed Coup de Soleil, proceeds from very different cauſes than expoſure of the head to ſolar heat; — but of this in another place, and at another time.

Citizen Bruant obſerved in the courſe of his Egyptian practice, that Ophthalmia and Dyſentery often alternated with one another; and for their removal, he ſometimes applied bliſters to the calves of the legs. The fluids, ſublimed by heat, and ſometimes repreſſed from the ſurface by cold, evidently ſought for an outlet. To bliſters, therefore, I would have preferred ſetons, or iſſues, or occaſional phlebotomy. In inveterate Ophthalmia, nothing can equal the efficacy of a ſeton or iſſue at the nape of the neck; yet no *Franko-Egyptian* phyſician I have yet ſeen, ſays a word either of ſetons or iſſues.

FORMS OF COLLYRIA.

No. 1. Of corroſive ſublimate, 6 grains; ardent ſpirit of any

any kind and pure water, of each 6 oz. Mix, and keep the eye constantly moistened with a cloth dipped in it.

No. 2. Of laudanum, a tea spoonful; ardent spirit of any kind, vinegar, water, of each 4 oz. Mix, &c.

To these two forms, particularly No. 2, I am inclined to give a decided preference.

No. 3. Of alum, 1 drachm; water, 8 oz.

No. 4, 5, and 6. Collyria similar to No. 3, may be made with an equal proportion of nitrated kali, (common nitre); of vitriolated zinc, (white vitriol); or of cerussa acetata, (sugar of lead.)

No. 7. Goulard's extract, a tea spoon full; vinegar, water, of each 4 oz. Mix, &c.

No. 8. Vinegar, pure water, equal parts. Mix, &c.

No. 9 and 10. When none of the preceding articles can be procured, salt, or even fresh cold water, may serve as an imperfect substitute.

D. WHYTE, M. D.

Bay of Aboukir, July 8, 1801.

On a new Method of treating the Effusion which collects under the Scull after Fractures of the Head. By J. Deveze, *Officer of Health, of the first class, in the French Armies.*

Of the different cases which require the operation of the trepan, I shall only consider the effusion between the dura mater and the scull, occasioned by blows and fractures.

Mr. Petit, a celebrated surgeon of Paris, has contributed greatly to the improvement of this art, by pointing out the particular symptoms which distinguish effusions under the scull from concussion of the brain. These different accidents equally result from falls or blows received on the head; and previous to this distinction it was easy to confound them, a mistake highly prejudicial to the patient who is affected with concussion only, as it requires a different treatment from effusion, and is not relieved by the trepan.

When there is a collection of blood from a blow or fracture of the scull, all authors advise the trepan, in order to discharge the collected fluid; but the difficulty of ascertaining the part where it has accumulated, often makes frequent repetitions of the operation necessary before it is discovered. Mr. Mareschal, first surgeon to Louis XIV. gives us an example of this; he trepanned