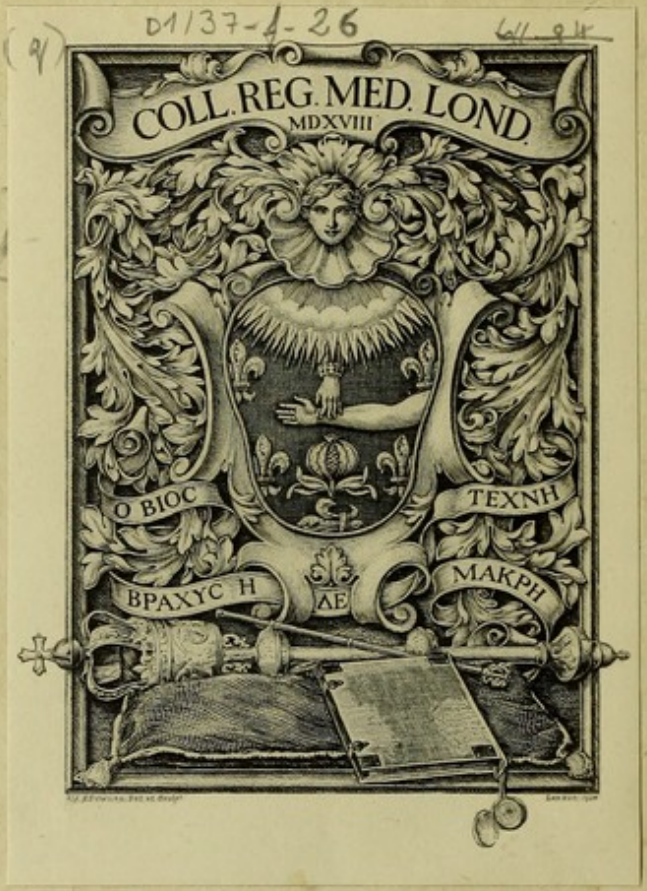
An account of a newly-discovered membrane in the human eye : to which are added, some objections to the common operation for fistula lacrymalis; and the suggestion of a new method of treating that disease / by S. Sawrey.



Dr Baillie.

From the Author

The dark Circle is part of the Chorvides.___ The Iris and Pupil, are seen through the transparent Memb-rane describ'd.

AN

ACCOUNT

OF A

NEWLY-DISCOVERED MEMBRANE

IN THE

HUMAN EYE.

TO WHICH ARE ADDED,

SOME OBJECTIONS TO THE COMMON OPERATION

FOR

FISTULA LACRYMALIS;

AND

THE SUGGESTION

OF A

NEW MODE OF TREATING THAT DISEASE.

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LONDON:

Printed by RIDER and WEED, Little Britain,
FOR T. BOOSEY, OLD BROAD STREET.

1807.

ACCOUNT

OF A

NEWLY-DISCOVERED MEMBRANE

OF THE

HUMAN EYE.

THE Eye is an organ so complicated in its structure, and presents so many obstacles to an anatomical investigation, that, even in the present improved state of our knowledge, its component parts are not well demonstrated, nor its functions clearly understood. The parts are so numerous and delicate, that it requires not only a steady hand and good sight to display them, but a careful judgment to distinguish between them.

In all anatomical researches, we should be wary, not to take for granted any thing which does not appear most clearly demonstrated; for the hands of an expert dissecter may display parts in a way widely different from nature:—he may make them assume almost any shape and appearance, which he has conceived to belong to them.

A little attention to the human eye has convinced me, that much remains to be done; because, from the complexity of the organ, parts have been represented as distinct, which have no separate existence; and others, that are really distinct, and which may be clearly demonstrated to be so, have remained unnoticed. These things, of course, operate as impediments in the way of improvement.

I have been more strongly impressed with the opinion, that the Eye has not yet been contemplated, by anatomists, with sufficient minuteness, by the circumstance of my having been led to the discovery of a membrane, which I had not found described any where before, and which was, therefore, new to me, and, I believe, is likewise new to the generality of the profession.

In autumn, 1803, when dissecting the eye of a bullock, recently taken out, I discovered a glassy membrane (which I had never before seen or heard of), lining the whole of the internal surface of the cornea lucida, and which I could only separate from it in small flakes.

The circumstance being novel to me, I took many opportunities of looking for it, and made many attempts to trace and separate it from the cornea, both in the bullock and sheep. After a variety of trials, I at length procured two small specimens of it, suspending a portion of iris; and likewise traced it to the confines, or meeting-place, of the cornea and iris.

In June, 1805, when demonstrating the eye of a horse to a friend (the eye not being very recent), I was struck with the strength and thickness of this membrane; for, in raising a portion of the sclerotic coat from the choroides, and dissecting it forwards, after getting beyond the ligamentum ciliare, I was astonished to find that none of the aqueous humour issued. Upon more strict attention, I found, that the anterior chamber was not opened, and that the water was still confined by the membrane I am describing; which was separated from the cornea, and attached to the edge of the iris.

From this I supposed, that putrefaction had made the great difference in it, and not that there was any original difference between the membrane in the eye of a horse, and that of a bullock or sheep. I, therefore, expected to find the same appearance in the bullock's eye, when in a similar state of putrefaction. But in this I was deceived; for I afterwards found, that there was a very great difference in the strength and thickness of this membrane, in the eye of those two animals.

After gaining this piece of information, I became enabled to trace and observe the membrane more exactly, and entirely separated it from its connections, so as to make an intelligible preparation of it. Soon after this, I dissected the eye of a hare, and found the membrane, if any thing, rather more strong and conspicuous (at least in proportion to the size of the animal) than in that of the horse. It is worth remarking, that, in this animal, the cornea lucida is remarkably large, the pupil large and round, and the lens big; hence the sphere of vision is ample: the eye also stands prominent from the orbit.

I shall now endeavour to give a more particular idea of this membrane: but it will be necessary to premise a few observations, concerning the parts with which it is connected.

The strong external coat of the eye, called the sclerotica, or cornea, has, I think improperly, been said to be an expansion of the dura mater of the optic nerve; for though the two may be traced into each other, yet parts very dissimilar in structure and functions in the body, are often observed to be continuous; but when the functions of each are different, they ought, in my opinion, to be considered as distinct.

The cornea is made up of two portions or segments of spheres;—the one larger; and the other smaller;—the one opaque; and the other transparent. The two corneæ are firmly conjoined together, as if by continuity of substance, but with a sudden alteration of structure.

The opaque cornea arises all around the optic nerve, and comes forward to receive the transparent cornea. It is made up of several strata of strong opaque fibres, closely compacted together. It is of different thicknesses, in different parts; and is perforated obliquely by blood-vessels in several places.

Just before it joins the inner edge of the transparent cornea, there is a groove, or slight depression, internally, all around, which lodges a whitish connecting medium, called ligamentum ciliare.

The cornea lucida is the segment of a smaller sphere, and is made up of strong transparent fibres, apparently not so firmly compacted together; for,

when macerated in water, it swells considerably, and becomes opaque. It forms the anterior, convex, prominent part of the eye, through which the pupil is seen, and the variegated colours of the iris; and it is the outward boundary of that cavity, which is called the anterior chamber of the eye.

The internal concave part of this cornea, is lined with the membrane which I have already mentioned. It is a highly transparent, dense, compact membrane; adhering (in the recent state) very closely, as if cemented, to the internal surface of this cornea: when peeled off in small flakes, it rolls itself up like parchment; and easily breaks; being only slightly, if at all, elastic.

This membrane is much more conspicuous in some animals, than in others. In the horse, and the hare, as remarked above, it is much stronger, and more easily detected, than in the ox, or the sheep. Maceration in water, or rather a slight degree of putrefaction, makes it quit the cornea more easily; but does not diminish its transparency; which circumstance, among others, creates a marked distinction between it and the cornea itself. In man, it is thin, though firm and brittle, in the recent state; but it is readily deprived of its firmness by putrefaction, and rendered incapable of dissection.

It is firmly united, as I have said, to the internal surface of the cornea, and is continued back to the edge of the iris, to which it adheres, as well as to the edge of the transparent cornea, and seems to form a connecting medium between the two, where it terminates. Sometimes I have thought that it was continued back to the edge of the ligamentum ciliare; but it alters its texture and transparency, becoming more pliable and opaque.

So perfect and distinct is this membrane, that, in the horse and the hare, I have repeatedly separated it entirely from the cornea, without the smallest rupture, leaving it attached to the edge of the iris, with a small portion of the choroid membrane annexed. After this, I have laid it on a piece of what is called asses skin, such as is used in pocket-books; inserted a blow-pipe underneath, and inflated it; and dried it, in this position, before a gentle fire, or in the heat of the sun. A little moisture on the posterior surface of the choroid

membrane, and iris, makes those parts stick to the asses skin, and prevents the air from escaping.*

Two of these dried preparations I have had the honor of showing to Doctors Marshal and Clutterbuck, and to Mr. Keate, Mr. Cooper, Mr. Ware, Mr. Carpue, &c. and likewise to Dr. Baillie; all of whom acknowledge it to be new to them.

Though I have been acquainted with this membrane so long, I would not speak very positively as to its use. Is it a secreting or a defensive membrane? I may be allowed to remark, that, with respect to all the cavities of the human body, the parietes, or surrounding parts, are lined with membranes somewhat similar. Thus, in the thorax, the ribs, and intercostal muscles, are lined with the pleura; and, in the cavity of the abdomen, we have the peritonæum. Hence, when water is collected in either of those cavities, it is not in immediate contact with the parietes.

In like manner, the aqueous humor does not lie in contact with the cornea lucida, but there is interposed between them the membrane I have described. May not this be one of its principal uses? namely, to defend the cornea from the aqueous humor, which would, probably, penetrate its porous texture, and render it thick and opaque, as I have observed the transparent cornea to become, when macerated in water?

I need not add, that the opacity of the cornea would be the cause of absolute blindness. Therefore this membrane, by its close and dense texture, not only preserves its own transparency, but protects that of the cornea, and thereby keeps vision perfect.

It is also of use to be acquainted with this membrane, in the operation for extracting cataract; as it may, in some instances, resist the point of the knife,

* The annexed plate was taken from a preparation made in this way, from the eye of a hare.

and be separated from the cornea; in which case, the anterior chamber would not be punctured, nor, of course, the aqueous humor discharged; a circumstance which would prove embarrassing to the operator.

SOME OBJECTIONS

TO THE

COMMON OPERATION

FOR

FISTULA LACRYMALIS.

The lacrymal gland is situated in an appropriate fossa of the orbit, a little above, and more inwards than, the external angle. The quantity of tear which this small gland will secrete, with the relief they afford to the troubled mind, is not a little astonishing. But the anatomist and physiologist can never cease to wonder, when he contemplates the functions of the human body.

But though the power of this gland be so great, on great occasions, yet its action appears, in general, to be proportioned to the exigencies of the circumstances. For ordinary purposes—I mean, for merely lubricating the internal surface of the eye-lids, assisting their easy motion over the balls of the eyes, and preventing abrasion—a very small quantity of fluid suffices; and no more, or very little more, is secreted. But if a foreign body fall into the eye, or the organ be otherwise greatly irritated, a very considerable quantity of tears is secreted, and the eyes appear watery.*

* The susceptibility of the human eye, with regard to mental impressions, is truly surprising. I know a lady, with an incipient fistula lacrymalis, in whom, in general, the eye appears pretty free from tears; but if she suspects that any person is looking at it, the eye instantly fills with water, which overflows the cheek, unless it be absorbed by a handkerchief. I have seen a gentleman who is very subject to inflammation in his eyes: a steadfast looking at them, for a second or two, will, at any time, make the larger vessels appear conspicuous, and occasion a general red appearance in the tunica conjunctiva, somewhat like a blush.

For ordinary purposes, I have said, little more is secreted than is sufficient for lubricating and supplying the waste which is going on by exhalation: but in order that even this small quantity should not constantly bedew the cheeks, nature has formed canals, or something like syphons, to convey away the superfluous tears into the cavity of the nose. But let us not get into an error, by supposing that, because the tears go into the nose, they are the lubricating fluid for that cavity, as well as for the eye. The fact is, that the membrana pituitaria has a proper œconomy of its own, and furnishes its own mucus. It is true, when those canals are obstructed, the patient complains of dryness in the nostrils, or nostril on the side affected; yet it is certain, that the mucus of the nose is secreted by the membrana pituitaria. How then, I would ask, is the dryness which certainly takes place in this case, to be accounted for? May not the oozing and trickling down of the tears upon this membrane, act as an excitement to its secreting mucus?

We know that there exists a great consent, as it were, between the two organs, Schneiders membrane and the lacrymal gland; or that they influence each other reciprocally, and are often affected by the same cause:—thus, a pungent smell fills the eyes with tears, and weeping produces an abundance of pituita. When, therefore, the lacrymal canals are obstructed, the tears, of course, do not come in contact with Schneiders membrane, and one cause towards the secretion of the lubricating matter to the lining of the nose, is done away. Hence, a less quantity is secreted, and a dryness of the nostrils experienced.

I have said, that the lacrymal gland is situated in an appropriate fossa, in the upper part of the orbit, near the upper and outer angle. It discharges its secretion by a number of small pores, under the upper eye-lid. The eye-lids are obliquely placed (the inner angle being pointed inwards, and rather downwards; and the outer, upwards and outwards), and this obliquity greatly facilitates the course of the tears towards the nose.

By those advantages of situation of the gland; from its opening from a number of pores under the upper eye-lid; from the oblique direction of the eye-lids, from upwards and outwards to downwards and inwards, the tears trickle upon the ball of the eye, and, by their own gravity, are directed towards those canals which are intended to convey away any superfluity.

Now, when the tears have bedewed the ball of the eye, they meet with the under eye-lid; the oblique edge of which prevents them from falling on the cheek, and conducts them towards the puncta lacrymalia, and so into the nose.

The small superabundant quantity of tears may be hindered from getting into the nose, in different ways; and this will constitute the disease under consideration. The obstruction may be in the ducts leading into the sac—in the sac itself—or in the duct leading from the sac into the nose. Or a tumor may be so situated in the internal canthus, as to interrupt absorption by the puncta lacrymalia, and produce many of the consequences of fistula lacrymalis.

But the neighbouring parts are not unfrequently the immediate seat of the malady; as the os unguis, the nasal process of the superior maxillary bone, &c. When those parts become enlarged, they may mechanically press upon the ducts or sac, and thereby prevent the ingress or egress of the tears, from the eye into the sac, or from the sac into the nose. When this is the cause of the disease, it must not be considered in an abstract form, but as connected with, or caused by, a disease requiring particular remedies; and if these be given successfully, and the original disease be removed, the canals will be allowed to return to their proper state, and will then perform their proper functions.

This disease, like most others to which the body is liable, seems to originate in inflammation; and by far the most frequent seat of it is in the lower part of the sac, or ductus nasalis.

The effect of inflammation on those passages, is fully demonstrated in coryza, which very frequently lays the foundation of the disease under consideration. Inflammation straightens canals, by swelling their linings, and thereby making their sides approximate each other. It seldom exists long without altering the structure, as well as the functions, of the part, which becomes, as it were, a new part: and, where it is seated in a canal, if it be not soon subdued, it often generates a permanent contraction in some part.

Those obstructions produce a watery appearance of the eye, which, in the incipient state, has been called *epiphora*; and, generally, after a longer or

shorter period, suppuration; when it is more particularly called *fistula lacrymalis*, for which various modes of cure have been suggested, both by the antient and modern surgeons.

In the cure of this disease, two things are intended to be effected; viz. to cure the malady; and to put, if possible, the passages into such a state, as will admit of the tears descending into the nose again.

Cure by actual cautery.—Before the anatomy and functions of the parts concerned were tolerably understood, of course the practitioner could have no principles or rules of the art, and no rational attempt could be made towards the cure. The tumor was opened, and escharotics of the severest kind were applied. And when a caries of the os unguis was detected, he not only scraped or rasped the bone, but even applied the actual cautery.

But this mode of treatment, though it cures the callous ulcer, must inevitably obliterate the sac. In this event, what course must the tears take? Yet it has been observed, that even the weeping ceased.

Cure by alteratives.—The famous and good old surgeon Wiseman began the cure of this disease, as it was the common custom of the time to begin with most others (which, by the bye, was often very successful), by bleeding and purging; after which, he ordered alteratives, and applied compression. This not succeeding, he opened the tumor, either by caustic or the knife, and used medicaments of various descriptions, to digest the callous ulcer, and cicatrized according to the rules of the then complex art. Wiseman's veracity may certainly be depended on; and, he says, he cured many by this process.

Cure by compression.—The French surgeons, Dionis and Garengeot, affirm, that they cured this malady by long continued compression alone, without the aid of any other thing.

Surgery must advance in the same progression as anatomy, as this affords us the rules of our art. When surgeons became better acquainted with the parts, and the functions of those parts became more clearly understood, they began to think of opening those obstructed syphons, or of forming new passages through

the bony partition which separates the sac from the nose; imagining that the tears would maintain the opening thus made, after some extraneous body had been kept in for a short period.

This is a very specious operation of surgery. It is an easy matter to talk of forming canals in the human body; but, I fear, a little experience will prove to us how abortive and unsuccessful the attempt is. Indeed, it is a branch of surgery, and no inconsiderable nor easy one, to open, and keep open, canals formed by nature, and to clear them from numerous obstructions. But how much more difficult must it be to keep open those which are formed by art.

If we look at the different canals in the human body, we shall find that it is not sufficient merely that they should be simply such; but, in order that they should be fitted to perform their respective functions, they are supplied with their respective lubricating fluids. This is either done by appropriate glands, situated in the neighbonrhood, and pouring their secretions upon the internal membrane of the canal, or by the membrane itself secreting.

The mouth and throat are furnished with glands to secrete saliva and mucus, the better to fit them to convey food into the stomach, and to prevent acrid fluids abrading them. And in the lacrymal passages, there is mucus secreted, not only intended to lubricate and to keep them from closing, but the better to fit and prepare them for conveying away the tears.

If, then, a new canal be formed, which has to convey the tears into the nose, it, of course, will be destitute of parts or functions for the lubricative and defensive purposes. As we cannot suppose that a canal, formed by a long-continued use of a leaden probe, would be possessed of an œconomy for secreting; the best we could imagine to happen, would be a hard callous one: hence it will be the more disposed to close.

In vain is it to say, that the tears will preserve the new-formed canal.—Can we rationally expect it? If it be a common accident for a passage to close which is perfectly formed, and adapted by nature, in defiance of those tears, can we expect she will do more for the very imperfect and ill-adapted one formed by art?

Cure by seton.—I believe, this mode of cure was proposed, some time back, in the French Memoirs; but the difficulty of executing such a plan, is a complete objection to it, if it were not liable to others of greater magnitude. A flexible probe, armed with a seton, was to be passed from the puncta lacrymalia to the sac, and from thence into the nose. But this would be a very difficult task, even to the most expert oculist. Indeed, it is the very method one would adopt to obliterate the passage, if such were wanted, and could be done.

Cure by probe, or syringe.—The French surgeons have been prolific in inventions for the cure of this disease. Among other ideas, Anel thought of breaking down the obstruction, and clearing the passage, by the use of a small probe, introduced at the puncta lacrymalia, or by means of a small syringe. But when we consider the nature of the obstruction, and the smallness of the probe or syringe which must be used on this occasion, it must instantly occur to every one, that those methods must be trifling and temporizing.

Cure by perforating the os unguis, or opening the obstructed duct.—This, I believe, is the common operation at present in practice. The incision into the sac is recommended to be oblique by some, by others semi-lunar. The sac being laid open, the os unguis has been perforated in many different ways. Arnaud used a grooved probe; and Petit an instrument he called the myrtle-leaf. Lemoriere inserted the beak of his forceps, broke down and wholly destroyed the os unguis—introduced a piece of wax candle for thirty or forty days—healed the wound, and left the new canal to its fate.

St. Yves perforated with a trocar; introduced at first a wooden wedge, covered with plaster, and afterwards tents of lint, which he changed occasionally.

Indeed, there seems almost an endless variety in the modes of cure used in this disease: but experience having shewn that the new canal thus made does sometimes fill up again, Woolhouse recommended the insertion of a leaden or silver tube, and the external wound to be healed over it.

Mr. Pott's mode of cure was, to open the canal into the nose, if possible; if not, to perforate the os unguis with a curved trocar, introducing a tent until grannulations appeared, when he substituted a piece of bougie or a leaden canula.

This was continued as long as the patient could be prevailed on to submit to it. Nearly the same mode of practice seems to have been generally employed since.

Messrs. Wathen and Ware, having met with frequent disappointments, adopted Woolhouse's mode, and introduced and left in the opening a silver tube; which at first was attended with flattering marks of success. However, it was soon found that the tube was not only apt to change its situation, but became filled up with inspissated mucus, and, of course, was abandoned. Mr. Pott's mode, with little variation, was again had recourse to, and, I believe, is now generally thought to succeed.

For various reasons, I much suspect there is some deception with regard to the alleged cures in this disease. I have minutely examined several people who have undergone the operation, in the hands of gentlemen of the greatest dexterity in this town, and am sorry to say, there was merely the appearance of a complete cure. The affected eye seems to be in similar circumstances with the other for a short period only after the parts are healed: it soon begins to weep when any little unusual stimulus is applied; or by walking in a sharp wind; or when exposed to smoke, or other acrid vapours; and then the patients find the necessity of applying an handkerchief to the inner canthus of the eye, to absorb the superabundant quantity of tears. This shews that the new duct, which was at first made larger than natural, is beginning to close.

In the ordinary state of the eye, it has been said, that very little more tears appear to be secreted than is necessary for lubricating the surface of the eye, and to supply the waste by evaporation. In this state, probably, the lacrymal sac and ducts might almost be dispensed with. It is only when the secretion of tears is unusually increased, that a channel becomes necessary for carrying off the superfluous quantity; a purpose to which the lacrymal ducts themselves are not always equal, when the flow of tears is sudden and large, as in weeping. It is further to be considered, that the disease in the lacrymal sac is a constant source of irritation to the eye itself, which is thereby kept in a tender and inflamed state. This occasions a continual increased secretion of tears. But when the parts recover their healthy state, and the irritation is removed, the increased secretion from the lacrymal gland disappears also.

In this state of parts, supposing a coalescence to have taken place between the sides of the sac, there cannot be so great a waste of the moisture of the eye; the superfluous quantity not being conveyed from it, of course, so great a quantity is not needed, and will not be secreted.

We are here led to admire the infinite wisdom and design of the laws of the animal œconomy: there are not only general laws for ordinary purposes, but temporary, or, as it were, discretionary ones, to answer existing circumstances. We see canals obliterated, and holes closed, at a period of existence when they are no longer wanted—we see peculiar functions commencing at destined periods, and ceasing when necessity no longer requires them.

Several years ago, assisted by Dr. Clutterbuck, I attempted to do the operation for fistula lacrymalis, upon a poor woman. After perforating the os unguis, and making a passage into the nose, I filled up the opening with a tent of lint, intending soon after to introduce some more solid substance. The patient did not return for several days; when I found that the lint had got out, and the perforation from the lacrymal sac into the nose had closed. Finding that she could not attend regularly, and had no intelligent person about her, all that appeared to be left us to do, was to attend to the diseased sac, and disregard the future course of the tears. The incision into the sac was filled up with dry lint, which was changed now and then. The inflammation and thickening of the sac gradually disappeared, the quantity of tears lessened, and, in the course of about two weeks, the wound healed. I have seen her several times since, and there are as good signs of a complete cure, as in those instances which I have examined where the canal was kept open for a longer time: but no one can imagine, that the opening into the nose is preserved in this case; all that appears probable is, that the sac is obliterated, and the surrounding inflammation taken away. As the disease in the sac vanished, the weeping became less and less; and now (except when any unusual irritation is presented) the eye seems perfectly free from disease.

If it should be found that these observations are in any wise founded in truth, instead of the painful and tedious operation of opening the sac, perforating the os unguis, and obliging the patient to wear a metallic tube for months, a very simple and easy mode of cure might be substituted, attended with very little

pain or inconvenience. The sac might be laid freely open, and occasionally dressed with dry lint, until the parts coalesced, or the cavity became filled up by granulations.—But no rule need be laid down: the intention being known, each might accomplish the end in the way he preferred.

I would not omit taking notice of another mode of cure, which comes recommended from the best authority; which is that of inserting a silver style, with a flattened and bent head, to be constantly worn. Mr. Ware thinks he has found it to conduct the tears into the nose. Whether a deception similar to that which I have already mentioned, takes place here, I cannot say, as I have not had an opportunity of examining any one who was wearing it.

In all the different ways mentioned, cures are said to have been effected. But it is inconceivable, that, after the use of corrosives, and still more of the actual cautery, the parts should be left in a situation fit to perform their functions: obliteration of the cavity seems to be inevitable after such treatment. And when we find a solid style answering the purpose equally well with a hollow tube, there really appears reason to suspect, that keeping open a communication with the nose, is not an essential part of the cure, and that, in the greater number of cases, the cavity of the sac is obliterated.

A

NEW MODE OF TREATING

FISTULA LACRYMALIS.

The symptoms of fistula lacrymalis, in the early stage of the disease, are a watery appearance of the eye, a dryness of the nostrils, and a regurgitation of tears, either pure or mixed with puriform matter, or with mucus, when the lacrymal sac is pressed. This last symptom proves the seat of the malady to be either in the lower part of the sac, or in the ductus nasalis.

It occurred to me, many years ago, when particularly attending to anatomy, (indeed it must have also occurred to others,) that the proper mode of cure for this stage of the disease, would be to open the obstructed duct (whether the obstruction occurred from its inspissated mucus, or a permanent stricture), from below upwards, by introducing a probe, or some other proper dilating instrument, into the nasal duct, at its orifice under the inferior turbinated bone.

The only objection which then appeared was, the difficulty of accomplishing it. However it appeared possible, and what is possible may generally be attained by perseverance and dexterity. After some little practice on the dead body, I found I was able to introduce a common sized curved probe completely into the lacrymal sac, by this way, with a tolerable degree of ease and certainty.

The advantage of this mode, if practicable (and that it is so, will appear from the following case), must appear evident to every one. The canal is of such a magnitude, in the healthy state, as to be capable of receiving a common sized probe; but in the mode commonly recommended, of introducing one at the puncta lacrymalia, the probe must be so small, and the way is so circuitous, that little can be expected from it; nor can much be hoped for from

injection by Anel's syringe, at least where the obstruction is of a permanent nature.

Of late, finding many and great objections to the common operation for this disease, I ventured to try to introduce a probe, in the way I am recommending, in the case of a lady who had a fistula lacrymalis.

In this instance, I not only succeeded in getting it into the nasal duct, but the introduction was attended with little or no pain, nor did it even cause any unpleasant sensation, or sneezing, which I expected it would have done. The advantage to the complaint was also great and immediate, as will be seen from a relation of the facts.

Oct. 15th, 1806.—Miss J—— applied to me for a weakness of sight.—The left eye was generally full of water, and vision only perfect for a few seconds, after absorbing the moisture with a handkerchief. The vessels on the ball of the eye, towards the inner canthus, were very conspicuous; the lids were glued together in the morning. She complained of a dryness of the nostril on that side, and that she could not breathe so well through it as usual. When the lacrymal sac was pressed, tears, mixed with puriform matter and mucus, regurgitated into the eye.

About eight years ago, a tumor formed in the inner corner of the eye, which burst and discharged matter for a considerable time; since which time, the above-described symptoms have been present. After two or three trials with a curved probe, of the common size, I found I was only able to enter the nasal canal for a little way, the probe feeling as if embraced tightly by the canal. I, therefore, had a smaller probe made; and, on the 22d, by gentle pressure, I felt the end of the probe suddenly pass through two different obstructed parts, and got it up a considerable distance, and with very little pain. On withdrawing it, a good deal of mucus adhered to the probe, and the patient found something trickle into her nose and throat, which she feared was blood; but, on blowing her nose, it was found to be water: she expressed much relief, feeling the nostril much more moist, and as if something had been removed, which enabled her to breathe through it more freely.

25th.—The weeping had become much less, but more particularly so on the day on which the probe was introduced. The eye-lids did not adhere near so much in the morning, nor were the vessels on the inside of the ball of the eye so conspicuous. I again introduced the probe with great ease, and kept it in for

a minute or two. When the lacrymal sac was pressed, she observed that she felt the probe to be moved.

26th —She felt almost quite well all day yesterday: when stooping forwards two or three times, water dropped from that nostril, which feels much more moist: she could blow the nose with greater ease: the eye looked considerably better. On pressing the sac, I could hardly perceive any regurgitation, and that only of water and a little mucus. I now introduced a probe of a rather larger size; when the bulbous part reached the angle of the eye, this became filled with water, which disappeared in a minute or two after withdrawing the instrument; water also ran down the probe whilst in the canal.

Nov. 16th.—The probe had been introduced only twice since the 26th. The eye did not now appear quite so well; I introduced the probe, and afterwards threw up a little luke-warm water, by a common syringe, fitted to a tube of the same dimensions and curve as the probe. By this means, I forced the water into the eye; some of it also escaped into the throat.

18th.—She was much better: I repeated the operation of probing and syringing. Dec. 1st. Repeated the operation of syringing and probing four or five times since the last report. She seemed well;—no watery appearance, dryness of the nostril, nor gumming up of the eye-lids; I purposed to repeat the operations of probing and syringing for some time.

It is to be observed, that, although the good effects of the practice, in this particular case, was so decisive, yet, from the disease having advanced to suppuration, it was not the most favourable for the operation. In an incipient state, one might more reasonably expect the same, or still greater benefit; for when suppuration once takes place, the structure of the surrounding parts becomes much altered.

I am aware, that the introduction of the probe is not altogether unattended with difficulty, and in some cases more than in others. It not only requires an exact knowledge of the parts, but also a quick sensation of touch, and some address or knack on the part of the practitioner, which is not easily explained. However, I am confident that a little experience will overcome the difficulty, and that the practice will tend greatly to promote the cure of the disease in question.

FINIS.

PRINTED BY RIDER AND WEED, LITTLE BRITAIN.