Practical suggestions for the treatment of lachrymal diseases / by C.R. Agnew.

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Certainly it is excellent discipline for an author to feel that he must say all he has to say in the fewest possible words, or his reader is sure to skip them; and in the plainest possible words, or his reader will certainly misunderstand them. Generally, also, a downright fact may be told in a plain way; and we want downright facts at present more than anything else.—RUSKIN.

Original Communications.

PRACTICAL SUGGESTIONS FOR THE TREATMENT OF LACHRYMAL DISEASES.

BY C. R. AGNEW, M. D.

The title of my communication will relieve me from the necessity of attempting a systematic dissertation upon the general subject of lachrymal diseases, and show that my present purpose is to lay before the readers of the American Practitioner a few practical suggestions, in such a manner as to make them the property of all.

The commonest form in which incipient lachrymal disease presents itself to the practitioner is that of the "weeping eye," as it is familiarly called, so that a few words upon its pathology and treatment would naturally introduce our theme. It is observed that the patient begins to be annoyed by having the lachrymal secretion increased so as to overflow the edge of the lower lid and trickle down the cheek,

rendering the use of the handkerchief frequent, especially when the eyes are exposed to currents of cool air. This abnormity may follow immediately upon an ordinary catarrh of the eyes, or more commonly of the nostrils, or come on gradually without any recognized cause. When this state of stillicidium or overflow of tears occurs, the practitioner should examine with great care the puncta, to see whether they are of normal shape and in their proper relations to the surface of the eyeball.

Abnormities in the inferior punctum are to be met with more frequently than in the superior, and their influence in producing stillicidium is much more marked. Commonly one or more of the following lesions may be observed:

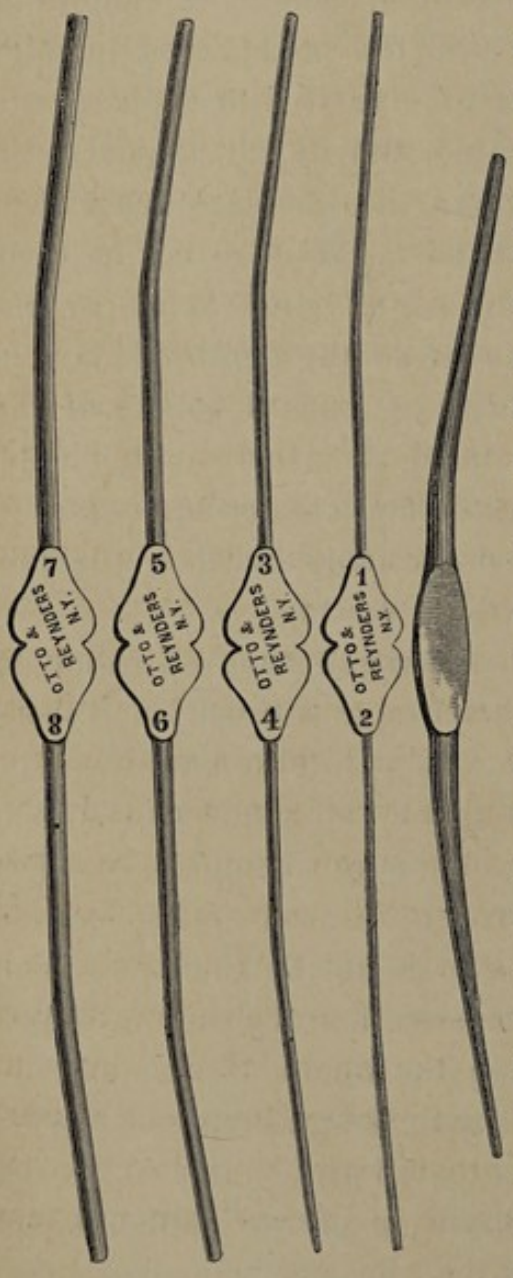
1. Eversion of punctum.
2. Obstruction or malformation of punctum.
3. Closure of punctum.
4. Inversion of punctum.

Any condition which alters either the shape or position of the inferior punctum is likely to cause stillicidium. For slight degrees of eversion the simple slitting up of the corresponding canaliculus is usually sufficient, care being taken to carry the cut down to the bottom of the vertical portion of the canal, that an opening may be made beneath the level of the secretion accumulating in the lacus lacrymarum. This simple procedure will do for slight degrees of eversion, such as we observe in the old subject, or in cases of chronic palpebral conjunctivitis; for all cases indeed in which there is not such a loss of substance in the corresponding lid as to render a blepharo-plastic operation necessary. It may be demanded also as one of the steps in a radical operation for eversion. The obstruction spoken of as forming one of the causes of stillicidium may be due to inflammatory or cicatricial changes in the edge of the lid, or in the lining of the canaliculus; but whatever its special cause, the only treatment indicated in the beginning is a free slitting of the canaliculus.

If there be inflammatory changes in the canal-lining they will require subsequent attention. We occasionally find obstruction due to a foreign body in the canaliculus. In two cases I have removed from the inferior canal dacryolites which had produced stillicidium, and become enlarged by slow accretion until they had reached the size of a barley-grain. When the inferior punctum is closed and stillicidium exists, we can usually find and open the corresponding canal by the following simple procedure: standing behind the patient and holding his head in such a manner as to give it firm support, the lower lid should be slightly everted, and its edge made tense by being drawn in the direction of the temple; then with a pair of scissors of medium size, so made as to cut at their very points, you should snip the edge of the eyelid perpendicularly to its conjunctival border to the depth of about a line and a half, cutting across the supposed course of the canaliculus. The canal once entered the usual slit should be made throughout its entire length, and treated afterward, to prevent closing, by running a probe daily between the raw edges until they have healed without uniting.

When stillicidium is due to inversion, some operation to correct the in-turning of the tarsal edge is usually necessary as a preliminary step, and before any interference with the punctum. I would recommend that in all instances in which Bowman's operation, or slitting of the canaliculus, is needed, the narrow, straight knife of Weber be used, and so carried forward in the act of cutting as to make the line of incision through the back wall of the canal rather than upward upon the tarsal edge, since by so doing the wound is not only hid from view, but placed in contact with the gathering lachrymal secretion. We should not be contented with simply correcting the apparent deformity or malposition of the punctum, but carefully explore the entire length of the canaliculus and nasal duct to ascertain whether there is any deeper disease or coëxisting stricture; a "weeping eye" may be due to a stricture

deep in the nasal duct. This exploration should not be done, when it can be avoided, until the wound made in slitting the canaliculus has partly healed along the edges, and thus grown less tender. I sometimes defer the deep exploration for a week or ten days, in the hope that Bowman's operation may suffice for a cure. To make this exploration you need a set of Bowman's probes, or the probe sold as Weber's, slightly bent to pass readily beneath the overhanging brow, choosing the smooth and not the notched one. Here, as in supposed stricture of the male urethra, make your first exploration with a full-sized probe or sound. By so doing you ascertain at once the seat of stricture and lessen the danger of producing a false passage. The probes numbered from one to eight are Bowman's; the remaining one is Weber's. A common seat of stricture is at the turn where the inferior canal empties into the lachrymal sac; and here, as in strictures of the urethra, you may often overcome the obstacle by delicately manipulating your probe. As the thickening is almost invariably in the floor of the canal, and not unfrequently of a nodular shape, you will usually pass it by, keeping the lid on the stretch, and depressing the handle of the instrument so as to press gently upward toward the



dome of the sac. If your probe does not readily enter, the ordinary strabismus-hook will be found a useful explorer, and likely to pass when the former does not. After entering the sac and impinging against the opposite wall, you should carry the probe into a vertical position and gently press onward toward the nasal duct. As the extremity of your probe passes behind the edge of the maxillary bone it approaches another common seat of stricture, and care is needed to prevent a false passage. Nothing is gained by violent pushing; a false passage may block the way to cure. From this point on for somewhat more than half an inch is a region of obstinate strictures. In this region, known as the maxillary portion of the nasal duct, the mucous membrane is closely identified with the periosteum, and hence inflammatory processes agglutinate the two membranes, and not unfrequently lead to hyperplasia not only of the mucous membrane, but of the periosteum and bone. If the stricture be permeable, I commonly pass a cylindrical laminaria probe, choosing a size that passes easily and yet fills the passage, and allow it to remain until by swelling it has received an impress of the stricture. If, for instance, there is a single dense stricture, it will make a marked impression upon the probe, preventing it from swelling at a corresponding point, and thus furnishing not only a measure of the depth of the stricture in the nasal duct, but an indication of its firmness. If you propose to incise the stricture, you are thus enabled to pass your knife on without hesitation or uncertainty to its seat. Care should be taken in withdrawing the laminaria probe not to twist or bend it so as to break it off in the duct. Should such an accident occur, I would push the broken fragment onward into the nostril, or withdraw it upward by enlarging the Bowman's slit so as to admit a pair of forceps into the tear-sac. I have never experienced the accident.

By the method indicated you have learned the seat and character of the stricture, and are now prepared to remove

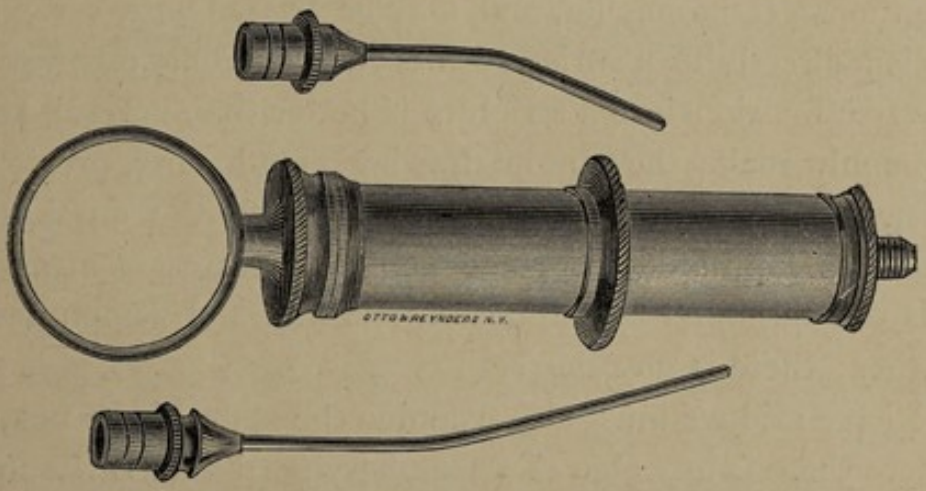
the real cause of the accumulation in the tear-sac and the backing up of secretion.

Some practitioners resort at once to a free incision of the stricture; others introduce a style made of leaden wire, fashioning its head so that it may lie concealed in the open canaliculus or bent over the edge of the lower lid near the commissure, and to be worn for weeks or months; others again, by passing a full-sized probe every day or two, attempt to excite active congestion, and thus cause the thickened tissue to melt. I do not think that either of the three methods can be so implicitly relied upon as to become exclusive.

And here we must introduce another phase of disease of the sac and nasal duct before we can attempt to lay down rules for the treatment of stricture. A neglected stillicidium and stricture leads sooner or later to progressive disease in the tear-sac and nasal duct. A comparatively limited inflammation increases and spreads until the sac is stretched by accumulated fluid, its walls altered in shape and character, and a more or less acute dacryocystitis induced. Under these circumstances something more must be done than attempts to pass the stricture—step by step with efforts to dilate the stricture must go measures for the cure of the catarrhal inflammation of the sac and duct. Much harm has been unintentionally done by those who have advised persons afflicted with incipient tear-passage disease not to have "their 'weeping eye' meddled with." Such advice was not without justification in former days, when styles were in common use, but is certainly very censurable in the present state of our knowledge.

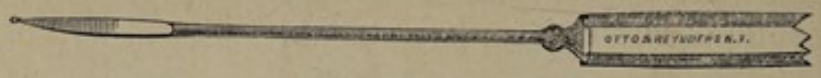
Most of the incurable cases now met with in practice are due to neglect under the advice alluded to. Many a patient goes for years experiencing all the inconveniences and dangers of stillicidium who might have been cured in three or four days and with very little suffering. Many a patient, from the

same cause, reaches a condition in which nothing but obliteration of the sac by surgical interference remains to be done. No possible harm can result from the Bowman procedure when it is performed with adequate skill. After noting the presence or absence of catarrhal inflammation of the sac and nasal duct, we should carefully explore the nares, and ascertain from the history whether there is chronic naso-pharyngeal disease. Having ascertained these facts we are then prepared to treat the case. I commonly begin by passing a full-sized probe, and washing out the sac, and nasal duct afterward, with a solution of common salt, by means of a syringe having a



nozzle so made as to pass into or beyond the sac. In two or three days I repeat the procedure. If there is much muco-purulent discharge from the sac, I commonly wash out the sac with warm water, and then inject a solution of nitrate of silver — one or two grains to the ounce — every day or every other day until the discharge loses its purulent character, when I resume the probing. The moment I seem to gain anything by probing I commonly intermit treatment, to see if the new action induced by passing the instrument will go on to a cure. I am convinced from most careful observation that in many cases the practitioner unintentionally protracts his instrumental work in such manner as to prevent a cure. A very few probings will tell us whether the case is one most likely to be cured by this method or the use of

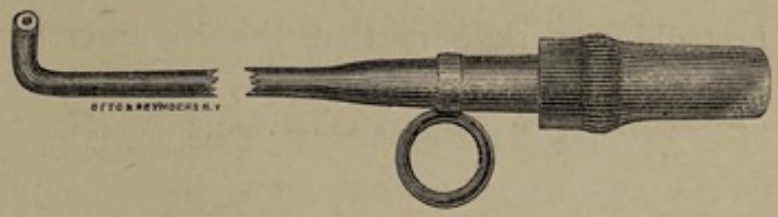
the knife. When convinced of the propriety of the knife, I commonly employ for incising the stricture one resembling Weber's straight knife. To facilitate the procedure I have had one made by Otto & Reynders, somewhat longer in the shank than Weber's, and with



about a quarter of an inch of the shank of soft iron, so as to allow bending, to adapt the shape to a projecting brow. I like this knife better than Stilling's for cutting a stricture, and it also serves better than any other for making Bowman's operation. It is smaller, and may be passed into a sac and applied directly to a stricture without wounding other parts. One free incision into a stricture is better than several, and I commonly make the cut in drawing out, having previously endeavored to carry the knife on through the nasal duct, feeling as I proceeded for the point of greatest obstruction. This will be found sometimes on one wall and sometimes on another; there is no rule.

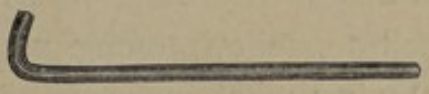
I have said we must also examine the state of the nostrils. Where there is any sign of naso-pharyngeal catarrh I subject it to treatment by teaching the patient to wash out his nostrils daily with salt and water, and by doing it myself at my visits. I find it also beneficial to direct to the region of the nasal ducts in the nares an occasional application of a solution of nitrate of silver — thirty grains to the ounce — especially when the Schneiderian membrane is known to be thickened as in catarrhal inflammation. In this matter, as in many emergencies of practice, I have been greatly aided by the simple invention of my colleague and friend Dr. O. D. Pomeroy. A simple catheter recommended and used by him is of great value. It consists of a small-sized black rubber Eustachian catheter, so bent at its objective end as to throw its contents upon the mouth of a nasal duct. By placing upon the manual end a small soft-rubber capsule Dr. P.

has made a syringe which carries any desired quantity of fluid, from two or three minims of solution to ten or fifteen. For washing out the nares I commonly employ the black rubber syringe, the bent nozzle of which is terminated by a flattened and perforated bulb, introducing the instrument behind the soft



palate, and pressing the head of the patient forward at the moment of injecting so as to insure a thorough injection of the nares.

I have tried the method of treating nasal-duct stricture by lead styles, and can not recommend it except under the following conditions: 1. When you have incised a very firm stricture, a leaden style may be introduced and kept in place for a day or two; 2. In cases of diffuse inflammation of the nasal duct of a passive character, where the mucous membrane lining the duct is boggy, it may with advantage be left in for three or four days. If allowed to remain longer than this it may induce or aggravate inflammatory changes in the mucous membrane, and produce a new stricture or chronic ulceration.



I have had occasion to remove styles when others had introduced them, and found that they had by pressure produced ulceration, and thus seriously complicated the case. Moreover they are not justified by the experience of those who in former times treated stricture of the male urethra by

prolonged use of metallic catheters. Modern experience is conspicuously in favor of rapid treatment of strictures of mucous tubes by incision rather than by slow dilatation. I would remark here that the common practice of giving astringents, to be applied externally as eye-washes in cases of lachrymal disease, is not to be imitated. Medicated collyria may do good in epiphora, where conjunctival irritation induces more lachrymation than can be disposed of, but not in the cases alluded to in this paper.

It now remains to make a few practical suggestions in regard to acute inflammation and abscess of the lachrymal sac, and for the treatment of lachrymal fistula, and the operation for obliterating the lachrymal sac in incurable cases. Our first view of the case may be when the tear-sac is filled by accumulated inflammatory products, the superimposed connective tissue and skin inflamed, and all the symptoms of acute dacryocystitis present; a slight catarrhal inflammation, complicated by an obstructive stricture, having by neglect thus eventuated. The common practice in such cases is either to make an error of diagnosis, and treat the case as incipient facial erysipelas, or making a correct diagnosis, to order leeches and hot poultices over the sac. It is difficult to say which is the more injurious mistake. Both rest upon that sad tendency among us to generalize too hastily, not observing what we see; that failure to analyze the objective and subjective symptoms in a given case. It being decided that the case is one of threatened or existing abscess of the sac, waste no time on leeches or poultices; they are both bad. The first and imperative indication is to make an opening and let out the contents of the sac. If this is not done ulcerative perforation is almost sure to ensue, and with it such changes in the sac-wall as render the restoration of the integrity of the lachrymal passage difficult if not impossible. If the matter is already showing itself as a yellow or bloody mark beneath the cuticle, your course is simple:

cut through the skin at the most depending part of the fluctuating tumor. If you can not see the matter through the skin do not make this external opening; it is unnecessary, inelegant, and may lead to fistula, and it should never be made if it can be avoided.

You have the choice of two other methods: either to slit up the lower canaliculus from punctum to sac, and thus evacuate the matter; or, if that be prevented by excessive swelling, to make an incision behind the commissure of the eyelids between it and the caruncle, where you can reach the cavity of the sac with great ease, and do nothing to embarrass you in the after-treatment of the case. For this latter purpose I commonly take a small straight bistoury or Beer's knife, and, standing behind the patient so as to control his head, open the lids as much as their swollen condition will allow, and then, passing my knife so that its flat grazes the eyeball, pass it into the cavity of the tear-sac in the depression existing between the commissure of the lids and the caruncle. This point is rendered easier of access by the swelling of the surcharged sac, which causes the anterior wall of the same to bulge much in advance of its normal plane. You then may empty the sac without difficulty and avoid an external wound; nor does your procedure injure the canaliculi, or damage any appendage of the eye, or interfere with after-treatment. After the evacuation of matter you may recommend hot fomentations for an hour or so, and cool or cold-water dressings afterward, depending upon the grade of inflammation and the sensibilities of your patient. In old subjects the subsidence of the swelling of the connective tissue may be hastened by gentle pressure, with dry lint and a single turn of flannel bandage. In cases of lachrymal disease in young subjects I would especially urge a very early slitting of the inferior canaliculus, as it will permit a free outflow of secretion from the sac toward the eye, and diminish the danger of ulcerative disease of the sac-lining and caries of bone. I always make

this Bowman opening even though I may not proceed further with the treatment, considering it the best guarantee against abscess. It will be necessary to give the young subject an anæsthetic for the operation, although commonly in the case of adults such is not needed in operations upon lachrymal diseases, except in the case of obliteration of the sac.

The treatment of fistula lachrymalis depends upon the state of the sac and nasal duct. If the fistula is due to a neglected but permeable stricture, you treat the stricture *secundum artem*, expecting when it is cured to see the fistula heal. If due to impassable and therefore incurable stricture, or complicated by chronic suppurative inflammation and ulceration of the sac, you must resort to the procedure reserved for the close of this communication—viz., destruction of the lachrymal sac.

To destroy the sac you must gain access to its cavity, and apply either the actual or potential cautery throughout its entire extent, and as far down the nasal duct as possible. Commonly for this purpose a free incision is made externally, extending from beneath the brow downward into the lachrymal sac, cutting the tendon of the tensor tarsi muscle, and so on over the maxillary edge of the orbit. This cut is about an inch and a half in length, and is attended by a good deal of bleeding, and usually leaves a more or less ugly scar—a scar always greater when the destruction of the sac is most complete.

I prefer and have for years employed the following procedure: with a Weber's knife I slit up both canaliculi from the puncta to the lachrymal sac. I then cut the sac-wall intervening between the two canals. This carries me behind the tendon of the tensor tarsi, leaving it intact. I then with a strong small scalpel make a sweeping cut upward, and then downward, so as to split the wall of the sac

that looks toward the eye, until I can introduce a retractor into the cavity of the sac. When I can do so I draw the anterior wall of the sac with the overlying palpebral commissure toward the side of the nose, and thus reveal the sac cavity. I then apply either fuming nitric acid or potassa fusa to the sac lining and the canaliculi until I feel sure that no mucous lining is left. I then wash out carefully, and allow the anterior sac-wall and palpebral commissure to fall back into place, when the sloughing and inflammatory processes destroy both sac and canaliculi; and no one could tell from any external or conspicuous signs that an operation for the destruction of the sac had been done.

I think this method might be rendered still more acceptable by the use of some one of the elegant galvano-cauteries. I have frequently done this operation, and never had any ugly inflammation or unpleasant result. It is a much more simple procedure than it may seem to be. When therefore we have a case of impermeable stricture or incurable inflammation of the lachrymal sac or nasal duct, especially where there is ulceration or extensive disorganization of the parts forming the passage, we are compelled to destroy the sac. The presence of caries of the bone does not forbid the operation, but only retards the recovery. In some instances of chronic lachrymal disease we may have to resort to general medication suited to the diathesis; but as a rule the treatment is mostly local, with such attention to hygienic measures as will diminish the chances of annoying catarrhal complications.

I would here venture the remark that some fail to get satisfactory results in the treatment of lachrymal diseases because they are too impatient. They are unwilling apparently to spend the time necessary to acquire dexterity in the use of instruments. They fall into the habit of rigidly

following a favorite method instead of studying the delicate shades of difference in cases so as to adapt suitable modifications of treatment. They encounter obstinate cases, incurable cases, obstructive patients, with obstinate mental or moral strictures, and are often too ready to reject impatiently an approved method for some illusive novelty.

In conclusion I would lay especial emphasis upon the necessity of exploring the nares in all cases of lachrymal disease, and treating them by cleansing or alterative solutions whenever there is anything in the objective or subjective symptoms which would lead us to suspect disease of the Schneiderian membrane.

NEW YORK, DECEMBER.

EXSECTION OF THE HEAD OF THE HUMERUS FOR "CHRONIC RHEUMATIC ARTHRITIS."

BY GEO. C. BLACKMAN, M. D.,

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I am indebted to Dr. F. Anderson, one of the resident physicians of the Cincinnati Hospital, for the report of the following case, in which I had occasion to perform exsection of the head of the humerus under circumstances perhaps unique; at least I have been unable to find the report of a similar case. Mr. Robert Adams, of Dublin, in his most excellent treatise "On Rheumatic Gout, or Chronic Rheumatic Arthritis," etc., London, 1857, acknowledges the difficulty of proposing any unobjectionable name for the disease under consideration, the remarkable character of which is that it seldom goes on to suppuration, "as other inflamma-