

**Mr Percival Pott and the treatment of lachrymal obstruction / by A. Freeland Fergus, surgeon to the Glasgow Eye Infirmary.**

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# Mr. Percival Pott and the Treatment of Lachrymal Obstruction.

BY

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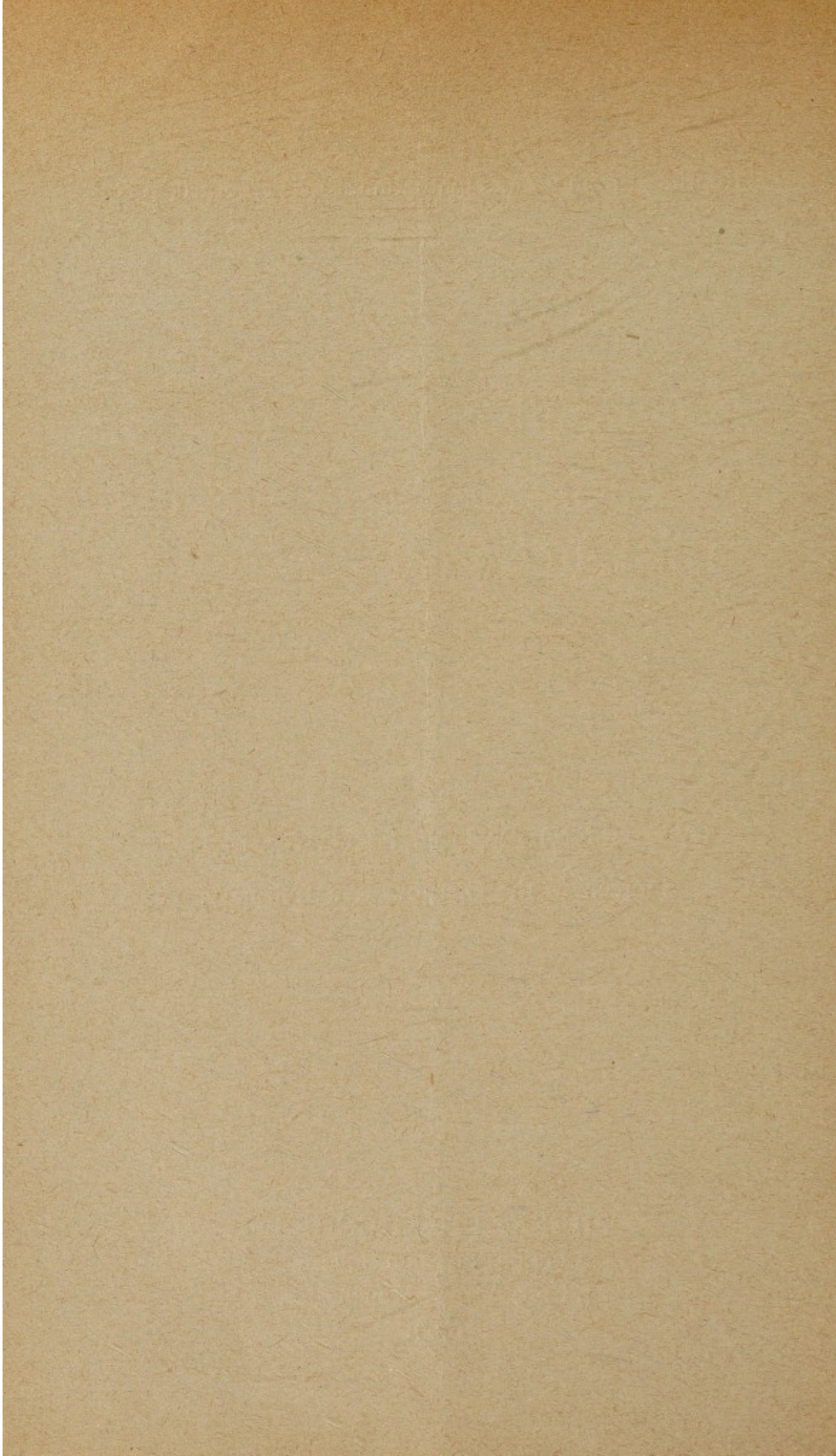
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*Surgeon to the Glasgow Eye Infirmary.*

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IT was said in long gone ages that there is nothing new under the sun, and we have just come across another illustration of this partial truth in a monograph written by Mr. Percival Pott entitled "Observations of that Disorder of the corner of the Eye commonly called Fistula Lachrymalis," and published in London in the year 1758. In this communication the author quite clearly describes two methods of treatment which are generally supposed to be of much more recent origin, namely, that by probing and that by perforation into the nares. It is not part of our present purpose to follow the author in detail into his views on the anatomy of the



parts and the pathology of the condition, suffice it to say that no doubt he was much in advance of the writers of his time. With reference to his article we only wish to mention the portions in which he indicates those two distinct lines of modern treatment perfectly clearly and distinctly. Thus he says:—"In the first and most simple state of this disease, viz., that of mere obstruction without any inflammation, modern practitioners have taken a good deal of pains to restore the parts to their natural state and use without any wound or division."

"The introduction of a probe, the injection of a fluid and the best of machinery to make a constant compression on the outside of the sacculus are the principal means by which this has been attempted.

"Some few years ago M. Anel made a probe of so small a size as to be capable of passing from the eyelid into the nose, being introduced at one of the puncta lachrymalia and passing through the sacculus and duct; with this probe he proposed breaking through any small obstruction that might be in the way of it.

"He also invented a syringe whose pipe is small enough to enter one of the puncta and by that means furnish an opportunity of injecting a liquor into the sacculus and duct, and with these two instruments he pretended to be able to cure this disease whenever it consisted in obstruction merely and that the discharge was not very purulent."

Pott's experience as regards the use of a probe would appear not to have been particularly fortunate. He says that he has used the method of treatment but that it gives rise to considerable pain, and that the inflammation which it often excites is much greater than any benefit



derived. Probably were modern ophthalmic surgeons carefully to review their own work they would, like Mr. Pott, confess that the treatment by probing is not satisfactory. He seems to have had better results from the use of the syringe. He says, "The syringe, if used while the disease is recent, the sac very little dilated and the mucous perfectly clear, will sometimes be serviceable. I have by its means injected a fluid through the sacculus into the nose and in two or three cases the patients have got perfectly well."

Before discussing the modern practice of the treatment of lachrymal disease it will I daresay interest the reader to hear what the author had to say as to a perforation being made between the sac and the nares. On page 63 we find, "I have already taken notice that the upper and hinder part of the sacculus lachrymalis is firmly attached to the os-unguis, a small thin bone just within the orbit, but this bone is so situated that if it be by any means broke through or removed the two cavities of the nose and orbit communicate with each other, consequently the os-unguis forms a partition between the hinder part of the sacculus lachrymalis and the upper part of the cavity of the nose, and it is by making a breach in this partition that we attempt the formation of an artificial passage for the lachrymal fluid."

A considerable portion of the essay is devoted to a discussion as to the best means of obtaining this passage of communication so that it may be permanent. In another part of his discourse he mentions removal of the sac, a process which he condemns as he says it is impossible thereafter to renew the passage.

In the same monograph we find it stated that the



French Academy of Surgery published some papers in which it was proposed that the probe should be passed from the nose up into the sac and that fluids might be injected in the same way.

From the foregoing it must be abundantly apparent that so far back as 1758 Mr. Pott had at his command the essentials of the most modern treatment of lachrymal disease. The only thing which modern surgeons do which is not mentioned by Mr. Pott is the slitting of the canaliculus with a Weber or other knife. We have never been able to appreciate the indication of this treatment. In our opinion it ought to be employed only in one class of cases, namely, those in which there is such a degree of ectropion that the punctum is no longer in contact with the conjunctiva of the eyeball. It is conceivable in such circumstances that if a canaliculus, preferably the superior, be properly slit drainage may take place at the inner canthus, but we regard such slitting as little else than malpraxis when there is no ectropion but only an obstruction, real or supposed, between the duct and the sac. It is sometimes said that the canaliculus is slit so as to facilitate the introduction of probes or of the nozzle of a syringe. We have always found that the proper and judicious use of Nettleship's dilator will make the passage wide enough to allow of probes and other instruments being introduced without the destruction of the lachrymal passages.

Percival Pott gave up the use of probes because he found that little or no benefit was to be derived from their employment. To most ophthalmic surgeons the modern use of the probe is largely associated with the name of Bowman, and unquestionably the great authority which



his name has necessarily given to them has determined the practice of most surgeons of recent years; yet the results in modern times are perhaps no better than those obtained by Mr. Percival Pott.

Visiting numerous clinics in the course of the year we find large numbers of patients who attend regularly and who have attended for many years to have probes passed on account of suppuration in the sac. If you get a patient in middle life who has a dacryo-cystitis you will all but invariably find that the patient at some prior time of life has undergone treatment by probing.

The huge instruments used by Theobald and others and the numerous modifications that have been made in the shape of probes are all indications that results have not been satisfactory, and that there is still something further desired. We have no wish to take up any prejudiced or erroneous position, all we want is that reliable data shall be gathered together. It would be well if a number of surgeons whose results could be thoroughly relied upon were to note how many cases treated by probing were entirely cured of chronic dacryo-cystitis within say a period of two years from the time at which they began the treatment. We venture to think that the number would be extremely small.

The method of treatment by probing has for a considerable time seemed to us to involve a radical mistake as regards the pathology of the condition. The original entity is not in the large majority of cases obstruction or stricture, it is the presence of a pyogenic membrane.

The inflammation to which this gives rise may no doubt in time cause a stricture, but so long as the treatment is devoted to this stricture, which is purely secondary and



not primary, so long will results be disappointing. The whole question then resolves itself into what is the best method of restoring the membrane to a healthy condition. The answer is not altogether easy. To begin with, probing is of use only in so far as it secures drainage, and for this limited purpose there are on the market no better probes than those of Sir William Bowman or the small silver probes of Snellen. These are instruments which can be introduced without much risk for the act of probing is not altogether free from danger. On more than one occasion we have seen laceration of the tissues caused by the careless passing of a probe give rise to septic infection of the cellular tissue in the neighbourhood of the sac. For this reason we consider large probes to be positively dangerous. As already indicated small, thin probes are the best and they should be very gently used. The instrument should be held as near its point as is convenient and carefully shoved along the various passages.

But the mere passing of a probe will not to any extent influence the septic condition of the mucous membrane; that, however, may be modified by thorough irrigation with a syringe; for this purpose normal saline will be found as satisfactory as anything else.

We are not acquainted with any drug which will render the tissues of the sac aseptic by destroying the micro-organisms. Notwithstanding all that has been written about them, Protargol, Argyrol, *et hoc genus omne* have been shown to be all but inert and of practically no value as germicides. Of the lot probably Protargol is the one whose germicidal properties are the least feeble, but we think that even when it is selected



for introduction into the sac any benefit depends upon the irrigation and not upon the salt.

In like manner in our own experience the best results yet obtained in the treatment of ophthalmia neonatorum are got by the thorough irrigation of the conjunctival sac with normal saline. Unquestionably solutions of Argyrol and Protargol give better results than nitrate of silver for the simple and obvious reason that nitrate of silver does harm by destroying the epithelium of the tissues and allowing the septic material freer access. Argyrol and Protargol are practically inert and therefore can be used without any detriment.

For these reasons our invariable practice in chronic dacryo-cystitis is to begin the treatment by the passing of Bowman's probes and the thorough irrigation of the sac with normal saline. Occasionally that succeeds in putting the matter right; if it does not, then the only other rational treatment is to remove the lachrymal sac altogether, an operation which in the main is tolerably easily executed. As a rule the removal of the sac gives the patient perfect comfort. There is not as might be supposed an undue amount of lachrymation; the patient only very rarely suffers from watering of the eye. A considerable number of sacs have now been removed either by the author of this paper or at his instigation by his colleague, Dr. McMillan, and only on one occasion has there been a troublesome amount of watering, which was easily put right by the removal of the lachrymal gland on the same side. Since this secondary operation was done the patient has been extremely comfortable and the eye feels perfectly well. This of course tends to confirm the opinion held by many that the tears are only



as it were secreted when there is urgency, and that the ordinary lubrication of the eyeball is carried on by the mucous fluid of the conjunctiva. Occasionally and most disappointingly the removal of the sac does not cause purulent discharge to cease; this is particularly true when a portion of the sac has inadvertently been left *in situ*. Nor is a recurrence of the suppuration uncommon when the disease is of tuberculous origin. The tubercular invasion is apt to extend beyond the sac to the surrounding tissues, and even the most careful and proper removal of the sac does not free the patient from the malady. Apart from this group of cases, however, the results are satisfactory alike to the surgeon and to his patient.

In acute cases, with the formation of an abscess, our own practice is invariably to make a free incision, to curette thoroughly the wall of the cavity, to pack it with sterile gauze and to let it granulate from below upwards. In other words we treat it like any other acute abscess. The sac no doubt is destroyed, but that is much better than leaving a pyogenic membrane in close proximity to the cornea. As already remarked our experience is that the epiphora following the removal or the destruction of the sac is so inconsiderable as to be of no importance. The watering of the eye which all but invariably is found to persist after the canaliculus has been slit is in our experience always greater in amount and more annoying to the patient.

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