

THE TREATMENT OF TRACHOMATOUS DACRYOCYSTITIS.

By T. HARRISON BUTLER, M.D. OXON., M.R.C.S. ENG.,
HONORARY OPHTHALMIC SURGEON TO THE COVENTRY AND WARWICK-
SHIRE HOSPITAL; LATE ASSISTANT SURGEON TO THE BRITISH
OPHTHALMIC HOSPITAL, JERUSALEM.

WHEN I first began to treat cases of lacrymal obstruction in Palestine I was surprised to find that they reacted to treatment very differently from similar cases in Europe. The average Arab's or Oriental Jew's eye (I do not here include the imported Polish Jew) will tolerate very much more intra-ocular manipulation than will the Western's eye; for example, one can needle without fear of any subsequent reaction and post-operative iritis is never seen in Jerusalem, if even reasonable cleanliness be observed. With regard to the lacrymal apparatus conditions are reversed: treatment which may in England be adopted with impunity in the East can lead to disaster.

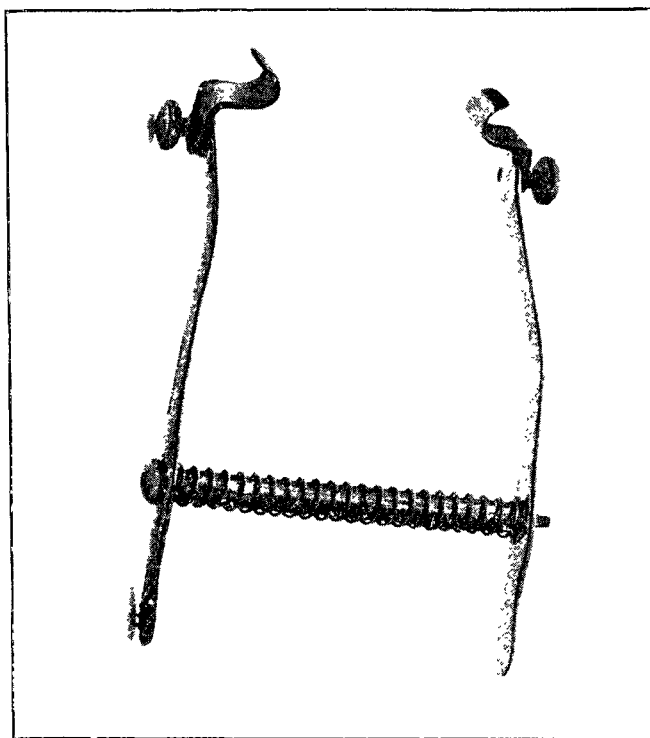
It has for a long time been my custom to treat lacrymal obstruction by daily lavage with Anel's syringe. I use solution of normal saline or boric acid, and if any mucoid discharge be present I leave a few drops of a 5 per cent. solution of protargol in the sac. I have carried out this method constantly in England and I have never seen a single case in which it caused irritation. In Jerusalem simple syringing has in my hands caused oedema of the lids and now and then a regular "black eye." On several occasions the syringe of lotion, instead of entering the nose or returning by the canaliculi, has distended the loose tissues of the lower lid. In two cases of suppurative dacryocystitis, one of them under the care of a colleague, an eye was lost through a retrobulbar abscess followed by optic atrophy. The injection of protargol in any solution stronger than 5 per cent., or of a $\frac{1}{2}$ per cent. solution of silver nitrate invariably caused oedema and great pain.

All these patients suffered from trachoma, often in a severe form, and I have come to the conclusion that the sacs and canaliculi were also trachomatous and were in consequence very friable. The slightest pressure appeared to cause a rupture of the sac walls and the fluid then passed into the surrounding tissues. These trachomatous sacs are often of enormous size; I remember two which when dissected out were as large as pigeons' eggs; the walls are very thick and yet so friable that it is almost impossible to remove them intact. Basso¹ has demonstrated the existence of a trachomatous dacryocystitis, and he points out that such a condition may be the sole manifestation of trachoma, and, in fact, was so in 14 cases out of the 20 which he examined.

Treatment must be carried out with extreme care, and no stronger solution of protargol or argyrol than 5 per cent. can be safely employed—in fact, it is better to use none at all until the sac has become accustomed to simple lavage with boric acid or normal saline solution. If pus be present it is very much wiser to dissect out the sac at once than to run the risk of causing a retrobulbar abscess. All the cases in which this was done did well, but owing to the prevalence of trachoma and chronic irritation of the lids in the East epiphora is more frequently complained of after extirpation than with us. The operation may be more extensive than usual, for the sac may extend to the middle of the lower eyelid. Hæmorrhage is apt to be very troublesome, but it can be to a certain extent avoided if it be borne in mind that it usually comes from the upper and nasal aspects of the sac. If the dissection be commenced from below and from the outside the sac can often be defined and freed from its attachments before the nasal side is attacked. If possible the angular vein should be located and the skin incision be made external to it; it should not be carried too high up or the branch which comes from the upper lid will be cut. Later in the operation when the sac has been defined the incision can, if necessary, be extended upwards. I rarely use a retractor; a suture through each wound lip held by a nurse is more convenient. Occasionally I use Axenfeld's retractor, which I have modified in the manner well shown in the accompanying illustration. The three sharp prongs of the original, impelled by a powerful spring, seemed to me so very dangerous that I got Messrs. Down Bros. to replace them by a simple curved flat plate. The original fork once wounded

my finger and the idea was ever present that the retractor might slip and all three prongs bathed in pus be driven into the cornea. The modified instrument has proved as efficient as the original and is perfectly safe.

I have rarely seen a case cured by the use of probes and styles. The highly fragile and irritable mucous membrane, which is so easily ruptured by simple hydrostatic pressure, is torn and lacerated by a probe, however dexterously passed,



and the resulting organic strictures are incurable. In my opinion if a case of dacryocystitis cannot be rapidly cured by simple lavage and protargol the sac should be extirpated.

The following cases illustrate some of the difficulties which have been mentioned:—

CASE 1.—A Jew, aged 55 years, came to the British Ophthalmic Hospital on July 8th, 1903, suffering from dacryocystitis. He was told to attend on the next day for treatment but was not seen again until the 13th. The canaliculus was dilated with Lang's dilator and the sac was irrigated with boric lotion. The sac was full of pus, but the duct was patent, fluid passing freely into the nose. This treatment was repeated on the 15th, 17th, 20th, and 23rd. Each time there was less pus, and there was no sign of any local inflammation after the treatment. The patient did not attend again until the 27th when he appeared with the following condition. The whole eye was pushed forwards, there was great pain, and much brawny oedema of the lids. The lids were hot and the patient had a raised temperature. There was no iritis; the pupil was normal in size but did not react. There was no perception of light. The man was admitted and an incision was made under the brow. Some thick pus was found on the outer side of the orbit and was evacuated by Hilton's method. On the 30th the inflammation was much less and the eye had resumed its normal position. V. = hand reflex, good perception of light; fundus not seen on account of opaque media. On Oct. 30th all was quiet; no perception of light; vitreous full of large floating opacities. The disc was dead white and the arteries were small.

This patient had severe trachoma. Most probably the walls of the sac were ruptured by the syringe and septic matter was forced into the tissues. The pus was found at the outer aspect of the orbit.

CASE 2.—A Jewess, aged 56 years, came to the British Ophthalmic Hospital suffering from trachoma, trichiasis, nebulous cornea, and adherent leucoma. There was a dacryocystitis of ten years' standing. The canaliculus had been slit up and probes had been passed. On June 29th the sac was syringed out with boric acid. On July 8th the sac was syringed out and a few drops of a $\frac{1}{2}$ per cent. solution of silver nitrate were injected and again washed out. On the 9th there was much swelling of the lids with chemosis and great pain. On the 13th a No. 4 Bowman's probe was passed and bare bone was felt. On the 15th the sac was again syringed out and some blood-clot washed out; there was a

¹ Annali di Oftalmologia, vol. xxxv., 1903, fasc. 7-9.

free passage to the nose. On the 20th the sac was swollen and hard; it extended to the middle line of the lower lid and was probably full of blood. On the 23rd the sac was dissected out. It was as large as a pigeon's egg and its walls were from 1.5 millimetres to 2 millimetres thick. The operation cured the case.

CASE 3.—A female Arab, aged 30 years. This case was almost exactly similar to the last cited. The sac was enormous and contained two drachms of pus; it was syringed out and a little $\frac{1}{2}$ per cent. silver nitrate solution was left *in situ*. This caused great œdema and pain. The sac was syringed out daily for 14 days with no result. A No. 4 probe found a tight stricture and bare bone. The canaliculus was now slit up by a colleague and the neck of the sac was divided with Stilling's knife, a large conical probe was passed into the nose, a counter puncture was made in the skin, and a drain inserted. This treatment had no effect. Ultimately the sac was extirpated and the patient was cured.

Both these patients had old cicatricial trachoma; the sacs were of large size with thick walls. Silver salts were not tolerated.

CASE 4.—A Jew, aged 26 years. On Nov. 10th, 1904, there was a discharge of pus from the left lacrymal sac. The condition was said to have been present for some time but the patient could not say how long. On the 11th the sac was syringed out with boric acid and a few drops of a 10 per cent. solution of protargol were left in the sac. On the 12th the left side of the nose and both lids were œdematous and there was much pain. This œdema cleared up in two days and treatment was continued with 5 per cent. protargol solution which was well tolerated. A month's treatment was without result.

In this case 10 per cent. protargol caused irritation. Parsons² recommends that from 10 to 15 per cent. be used, and I have personally often used 15 per cent. in England. In Palestine in trachomatous cases even 10 per cent. is never tolerated.

Coventry.

ON THE PATHOLOGY AND TREATMENT OF INGUINAL HERNIA IN CHILDREN.¹

BY C. H. FAGGE, M.S. LOND., F.R.C.S. ENG.,

ASSISTANT SURGEON TO GUY'S HOSPITAL; CONSULTING SURGEON TO THE EVELINA HOSPITAL FOR SICK CHILDREN, SOUTHWARK.

OUR ideas on the pathology and treatment of this exceedingly common ailment have been so considerably altered during the last ten years that I think no excuse is necessary in choosing this as the subject for our consideration to-day. I shall found my remarks on 78 patients who were all suffering from inguinal hernia and who were operated upon by me in this hospital; I have purposely excluded my other cases as these, treated in similar circumstances and by the same method, well illustrate the points which in my opinion demand our attention in dealing with hernia in children. In briefly discussing the pathology of this condition I shall ask you to accept the view which was first definitely laid down by Hamilton Russell² of Melbourne which states that hernia is primarily a developmental defect owing to either partial or complete persistence of the embryonic processus vaginalis. Russell has expanded his theory so as to include herniæ in all situations and whenever they may appear, and although others hold an opinion contrary to this as to the causation of some herniæ occurring in adults most of those who have given the subject much attention agree with Russell's view in the causation of the condition which we are discussing to-day.

You will remember that in foetal life a process of parietal peritoneum is pushed or drawn down in front of the descending testicle, and that from this the tunica vaginalis is formed, the remainder of the peritoneal tube in normal circumstances being obliterated. It is a well-accepted view that persistence of the whole process gives rise to what has for a long time been called a "congenital" hernia; it is strange that while this is allowed the presence of a peritoneal process extending from the internal ring along the

inguinal canal and yet unconnected with the tunica vaginalis should be regarded as an entirely new formation driven down from above by abdominal pressure. It is surely more logical to admit that while in some cases the processus vaginalis may entirely persist, in others it may do so partially, giving rise to a sac which should bowel or omentum come down into it will produce in a child what was regarded as an acquired inguinal hernia; this will then be more correctly described under the term of partial funicular or congenital hernia. To my mind this is a far easier explanation than to suppose that increased abdominal pressure from flatulence or coughing is associated with a local weakness of the abdominal wall in the inguinal region, which have previously been regarded as factors of primary importance in this connexion. No doubt increased abdominal pressure from flatulence due to improper feeding or from straining due to phimosis may be contributory causes, for it is of course clear that the mere presence of a peritoneal sac does not constitute a hernia unless there is some abdominal viscus which can be made to descend into it. But I want to insist that the primary and chief factor is the patent funicular process, and that it is often present was shown by Murray at the British Medical Association meeting at Exeter in 1907, who reported that in 200 consecutive necropsies 68 potential hernial sacs were found, of which 13 were inguinal; this confirms Sach's investigation upon the bodies of infants at four months when in 59 per cent. of a large number he found this process incompletely closed.

I wish as far as possible to avoid the error of drawing strict statistical deductions from a small number of cases, but in pointing out that in eight only of my 78 cases was the peritoneal process complete I am in agreement with the general opinion that the "total funicular herniæ" form only about 10 per cent. of all cases; Murray, 18 per cent.; Styles, 5 per cent. in 360 cases. In these eight patients the testis was either undescended or could be returned into the canal, and similarly of the seven girls upon whom operation was undertaken the ovary was found in the sac three times.

With regard to the diagnosis, there is only one inguino-scrotal swelling which is likely in a child to give rise to any difficulty and this is a patent processus vaginalis containing fluid, or in other words a "congenital" hydrocele. These swellings are in my experience usually irreducible, though the fluid will spontaneously return into the abdomen when the child has been lying down for a short time. When the fluid returns into the vaginal process it does so slowly and this is in itself quite sufficient to differentiate it from a hernia. In this relation I cannot agree with my former colleague Mr. H. S. Clogg, who in his paper in the *Practitioner* of September, 1907, states that a hernia in a baby may be translucent owing to the thinness of the bowel wall. I was taught that this was so, yet though throughout my seven years as a surgeon here I have systematically investigated this point I have never seen a translucent hernia though I have been called upon to operate upon two or more translucent swellings admitted as herniæ which proved to be hydroceles. I should much like to have the opinion of those present upon this point.

With regard to treatment, I have never convinced myself that circumcision in my hands has had the slightest effect in aiding the cure or even in preventing the enlargement of a hernia, nor should I expect this to be so, for I have never seen in a child the subject of hernia a degree of phimosis sufficient to balloon the prepuce which must surely have resulted if there were so much obstruction to micturition as in any way to influence the descent of a hernia.

With regard to trusses, I think we may look upon the woollen skein as obsolete, and though of course such an appliance can do no harm its use is to be condemned, as when such advice is given to the parents a false sense of security is produced and so further visits to the medical practitioner are postponed with the result that any attempt at efficient treatment is delayed. It is unnecessary to point out that truss treatment must begin as soon as the rupture appears. In a child a well-fitting spring truss covered with rubber must be applied daily before the child is taken from his cot, while the hernial contents are still within the abdomen, and in many cases where the hernia tends to come done at night a light truss must be worn at night also. The difficulty of efficiently carrying this out and of preventing the skin under the truss becoming tender and excoriated is enormous, and while I am very doubtful whether it is never systematically done by the poor I know that even among private patients the details of this treatment are often

² Brit. Med. Jour., February, 1907.

¹ A paper read before the Lambeth branch of the British Medical Association at the Evelina Hospital on March 26th, 1908.

² THE LANCET, Nov. 18th, 1899, p. 1353, and May 31st, 1902, p. 1519.