of toward the hollow of the sacrum as is usual. To effect this change of flexion, the blades should be introduced in such a way that the cephalic curve should pass over the ears of the child, the tips resting on the occiput. When traction is exerted, the forceps being so applied, the result must be that the main force of the traction is expended on the occiput, and, as the result, the occiput is drawn down and the head tilting on its attachment to the spinal column yields to the leverage thus applied, and the frontal end being forced

up the flexion of the head is at once established, and the occiput becomes the lowest part; the case can then be left to nature, and the forward rotation of the occiput soon takes place. The flexion is often facilitated by pressing the frontal end of the head upwards with one hand, while the occiput, held firmly within the blades of the forceps reversed, is drawn downwards with the other. If, owing to some emergency, immediate delivery is demanded, the forceps should always be taken off after the head has been flexed and then reapplied in the usual way, and the delivery effected; the operator favoring during the traction the forward rotation of the occiput. The extraction of the head with the forceps reversed is not a safe procedure, the tips of the blades tending to produce lacerations in the floor of the vagina and of the perineum.

In three cases, where all efforts at restoring the normal flexion of the head had failed, and the descent of the head had become arrested, owing to a want of adaptability between the foetal and pelvic diameters, I have seen further delay avoided and a successful and comparatively speedy result obtained to both mother and child by completely extending the head, thus converting a brow presentation at once into the most favorable variety of face presentation, namely, that in which the chin presents under the pubic arch.

The object sought in the preparation of the paper has been to insist upon the necessity of early making out the position, as well as the presentation, in every case of labor; the great advantage to be gained from the practice of an external palpation of the abdomen; in cases of posterior positions of the occiput the importance of an early recognition of any lack of flexion which will be liable to prevent the subsequent forward occipital rotation; the danger, if forceps are applied

to an extended head so situated, of still further increasing the extension, and the ease with which traction, applied on the occiput by means of the forceps reversed, not only restores the lack of flexion, but also facilitates the forward rotation of the occiput and the speedy and successful termination of the labor.

THE PROPHYLACTIC TREATMENT OF OPHTHALMIA NEONATORUM.¹

BY WALTER P. MANTON, M.D. (HARV.), OF DETROIT, MICH.

NEARLY two years ago I published a paper on this subject in the *American Journal of Obstetrics*,² but, as a large number of articles on the treatment of this disease have appeared, both in this country and abroad since then, it is my intention to-night, in a measure, to bring together these more recent observations and opinions of the treatment first inaugurated by Credé, of Leipsic, for the prevention of ophthalmoblenorrhœa. It may, however, at the start be advisable to briefly consider this disease; its ætiology, and the treatment employed for its cure.

As regards the fatality of this ophthalmia to the eyes of the new-born, Lawrence says it "causes more blindness than any other inflammatory disorder that happens to the eyes."³ Vogel⁴ states that 80 to 90 per cent of all cases met with in practice affects the eyes of the new-born. Statistics go to show that in Germany and Austria the blindness found in the various asylums due to this disease is from 33⁵ to 75⁶ per cent; but I am unable to find any figures in regard to this in the United States.

In a country like ours, where the women of all classes are confined in their own houses, and lying-in hospitals are poorly patronized, the making of statistics on this point would be exceeding difficult. Every practitioner, however, has met with such cases, and there can be no doubt but that, although the percentage is very much below that given by Vogel, the disease is sufficiently common to make it an object of dread.

If the importance of sore eyes in the baby could be impressed upon mothers and nurses, and cases could be treated from the beginning, the results would not be as disastrous; for, as Williams⁷ says, "no disease is more fatal to the eyes when neglected or improperly managed"; while, on the other hand, "none offered better results from judicious treatment, for even in its worst form it is always curable."⁸

Not every inflammation of the eyes met with is a purulent ophthalmia, and yet in the early stages it is often impossible to determine whether the conditions present are harmless or vicious. For this reason the accoucheur should warn the attendant to notify him at the first indication of trouble with the infant's eyes.

Ophthalmia neonatorum usually begins several days after birth. It may appear as late as the ninth day, but this late development is so rare that of fifty-one cases affected with the disease, out of 1,092 chil-

¹ Read before the Detroit Medical and Library Association, January 19, 1885.

² October, 1883.

³ Diseases of the Eye. Philadelphia, 1884, p. 243.

⁴ Lehrb. d. Kinderkrankh. Stuttgart, 1880, p. 71.

⁵ Königstein, Arch. f. Kinderheilk. Bd. III. 1882.

⁶ Græfe. Volkmanns-Klinische Sammlung. No. 192.

⁷ The Diagnosis and Treatment of Diseases of the Eye. Boston, 1881, p. 88.

⁸ R. Liebreich. Medical Times and Gazette, 1871, Vol. ii., p. 763.

dren, the period of incubation was nine days in only two instances. In the very large majority of cases the blennorrhœa appeared before the fifth day; so that we are safe in assuming that all cases developed after that period are due to infection after birth from dirty hands, lochia, etc.

The disease usually begins in a way which is far from alarming the attendant of the child — and much mischief may be done before it is brought to the physician for treatment. Thus a case is mentioned by Ryall,¹ of Dublin, in which the mother brought both lenses of her baby's eyes, and some of the vitreous humor, in a wineglass, when applying for assistance.

The first symptom to be noticed in ophthalmo-blennorrhœa, is a slight reddening of the skin of the upper eyelid, accompanied by a watery discharge from the eye, and photophobia. If the conjunctiva is inspected it will be found reddened and velvety. By the next day, or even in a few hours, the lids, and particularly the upper, will be found enormously swollen and livid, and the secretion, becoming more and more purulent, is poured out in quantity. "The upper lid," says Nettleship,² "hangs down over the lower and is often so stiff that it cannot be completely everted."

The lids often become glued together by the dried pus along their edges, and the pent up and increasing secretion behind causes them to bulge forward. If, at this stage, the lids be carefully drawn apart — and the greatest care is necessary lest the cornea, perhaps already damaged, be ruptured — the conjunctiva, bathed in pus, will be found greatly injected, and hæmorrhage will occur even with the most tender handling. The great danger from this disease lies in the strangulation of the blood-vessels, and the local influence of the purulent discharge. These, if left to themselves, are very apt to lead to extensive corneal sloughing, or the formation of deep ulcers and perforation.

The ætiology of this disease is now pretty well established. It is caused by a specific virus which is identical with that of gonorrhœa. This virus, like all other important matters now-a-days investigated, has a micrococcus of its own, or rather one which it shares with the discharge of gonorrhœa. This coccus was discovered by Prof. Alb. Neisser in gonorrhœal pus, and named by him gonococcus. The cocci form colonies of ten or twenty individuals, and are enclosed in a sheath of mucus; but as a peculiarity they are never seen in close contact with one another. Usually they are seen adhering to pus corpuscles, but occasionally are found on epithelial cells. They possess an affinity for methylviolet and dalia, and may also be colored, but not so distinctly by eosin. The method employed for their detection is that of Koch.

In all the gonorrhœal pus examined by Neisser, the characteristic coccus appeared, but in no other, save in ophthalmo-blennorrhœal pus was it to be found. The constancy of this coccus in gonorrhœal discharge has been further proved by the researches of Weiss, Ehrlich, Sattler, and others. Sattler, and others have also attempted the "pure" culture of this micrococcus, but as yet have not met with complete success in their experiments.

Shirmer³ reports a case of a six-day old child, in perfect health, with a healthy mother, whose eyes

became infected by lochial secretions. In forty hours an ophthalmia was produced and in the secretions from the eyes Sattler found the gonococcus.

Zweifel,⁴ of Erlangen, experimented with six healthy children, having healthy mothers, the absence of syphilis, gonorrhœa, etc., in whom during pregnancy was positively ascertained. Lochial discharge from these mothers were placed in the children's eyes, the result being an inflammation in one case. This, Zweifel thought to be a genuine ophthalmo-blennorrhœa, but it was discovered that the father of the child lay sick with diphtheria in the same room, and the secretions from the child's eyes, which were examined by Sattler, were found to be *diphtheretic only*.

Without going further into the discussion of this point, it is very evident that ophthalmia neonatorum is caused by a specific, active principle, not yet isolated, found in the secretions of gonorrhœa.

The predisposing causes of this blennorrhœa, according to the investigations of Credé,⁵ are a premature rupture of the membranes, and a prolonged second stage; that is, anything over one hour.

All treatment of ophthalmia neonatorum heretofore has been directed to the disease after its presence has become evident. This has consisted in such household remedies as breast milk, pieces of human placenta, salves, etc., or the more radical professional treatment with caustics and the like. Since Credé's first article appeared, various methods or modifications of the treatment advocated have been tried. These have generally consisted in washing out the vagina with antiseptics before and during labor; immediately wiping the child's eyes as soon as the head is born, with cotton or bits of rags wet in carbolic, salicylic, or boracic acid lotion; irrigation of child's eyes with carbolic lotion or plain water, etc., and have been more or less successful.

Credé's⁶ own first attempts were directed to the mother. Each pregnant woman entering his hospital with gonorrhœa or leucorrhœa had the vagina washed out with an antiseptic lotion at frequent intervals; and the lying-in underwent this treatment every half hour. This diminished somewhat the frequency of ophthalmo-blennorrhœa, but was not altogether satisfactory.

Attention was then turned to the eyes of the child, which received a drop of a weak solution of borax (1:60). This also proving unsuccessful, Credé left off washing out the vagina, December, 1879, and began cleansing the eyes of the child with a solution of salicylic acid (2:100), a single drop of a solution of nitrate of silver (1:40) was then allowed to fall between the lids, and the eyes were kept cool for twenty-four hours by bits of cotton wet in the salicylic lotion. Finally a two-per-cent solution (1:50) of nitrate of silver was used after the bath, and no further attention was paid to the child's eyes. This treatment practically reduced the percentage of ophthalmo-blennorrhœa to 0 in Credé's clinic.

During the early part of 1884 Credé published a pamphlet⁷ in which he not only reviews his own experience in this treatment, — extending over a period of about five years, — but has also collected the writings of all others on this subject up to date of publication. The general verdict being in nearly every instance favorable to the method.

¹ Centralblatt f. Gynäkologie. 1882, p. 209.

² Separatabdruck. d. Arch. f. Gynæk. Bd. xxi. Heft 2, 1882.

³ Arch. f. Gynækologie, Bd. xvii, p. 50; also Bd. xviii, p. 367.

⁴ Die Verhütung der Augenentzündung der Neugeborenen. Berlin, 1884.

¹ Tr. Ass. of Fellows of College of Physicians in Ireland. Vol. iv., p. 343.

² Diseases of the Eye. London, 1884, p. 75.

³ Archiv. f. Gynækologie, Bd. xxii., p. 318; also Bd. xxiii., p. 325.

Since the publication of my own paper on this subject, I have seen a large number of children treated by Credé's method in the clinics of Vienna and elsewhere, and I cannot recall a single case of the disease where the application has been carefully and thoroughly made.

Leopold¹ reports from the Dresden Lying-in Hospital a series of 1000 cases thus treated, with three cases, or 0.3 per cent of ophthalmia neonatorum. In 522 additional cases, where the application was made each time by an assistant, the nurses having nothing to do with it, the percentage of blennorrhœa was reduced to 0.

Beumer and Peiper² report from the Klinik and Poli-Klinik of Greifswald, where the percentage of ophthalmia neonatorum has, during a period of twenty-four years, varied between 1.7 per cent and 30.8 per cent that "with the adoption of Credé's prophylactic treatment with nitrate of silver, the change was at once evident. There were, indeed, a few cases of the disease, but these were of such a light degree that they can hardly be called blennorrhœa, especially as they for the most part yielded at once to the treatment with sulphate of zinc, or Boracic acid, being cured in a few days."

The most recent report from our own country comes from Dr. Garrigues³ of New York, who found that of 351 children treated by this method in the Maternity Hospital, not one was affected with ophthalmia-blennorrhœa. The perfect results now obtained by Credé's method, make it obligatory in every lying-in institution to adopt this treatment. And, as the disease is also met with more or less frequently in private practice, no physician should consider his obstetrical armamentarium complete without a small bottle of a two-per-cent nitrate of silver solution. And in every case where there is a history of specific disease, or leucorrhœal or other discharge from the genitals during pregnancy, it should be the care of the accoucheur to see that the child's eyes are properly treated prophylactically. The *modus operandi* is so simple that it requires no experience or training in its carrying out. After the bath the child's eyes should be wiped with a bit of cotton or linen rag wet in clean water, every particle of smegma, etc., being thoroughly removed. The lids should then be carefully separated by the thumb and fore finger of the left hand, while with the right a single drop of the silver solution is allowed to fall from a glass rod into the middle of the cornea. With a clean bit of rag wet in water, the eyes are again wiped and dried. Further treatment there is none. It is well to see that the tip of the glass rod is smooth and rounded so that if coming in contact with the cornea, it can produce no injury.

COMBINED VERSION (BY INTERNAL AND EXTERNAL MANIPULATION) IN PLACENTA PRÆVIA, WITH REPORT OF A CASE.

BY J. N. HALL, M. D., (HARV.), STERLING, COLORADO.

The case following is reported as showing the value of the method of version by combined internal and external manipulation in placenta prævia in cases of emergency, where a consultation is impossible and all that is done must be done by the physician with the aid only of such assistants as may be found in any house.

¹ Arch. F. Gynækolgie. Bd. xxiv, p. 91. 1884.

² Arch. F. Gynækolgie. Bd. xxiii, y. 479. 1884.

³ American Journal Medical Sciences, October, 1884.

Mrs. J. P. G., married, twenty-four years old, fourth pregnancy. Last menstruation June 12th to 15th. On January 5th, hæmorrhage occurred, estimated at a pint and recurring on 12th, advice was sought. Although there was complete placenta prævia, temporizing measures were adopted until June 26th, two or three slight floodings occurring meanwhile. After a hæmorrhage of half a pint on that day, induction of labor was decided upon, the os being soft and admitting the finger easily. The nearest available medical assistance being one hundred miles distant, the operation was done with the assistance of the husband and two women of the house. Complete anæsthesia by ether being regarded as of doubtful expediency under these circumstances, the woman was allowed to inhale chloroform to the extent of becoming only partially unconscious. At 9.20 A. M., the forefinger was introduced into the os, and in about thirty minutes the placenta was detached upon the right, a foot seized, and, by assistance of the left hand externally, was brought down, two fingers only having been passed into the uterus. Traction on the foot checked all hæmorrhage, and, in ninety-five minutes from the beginning of the operation, a male child weighing five pounds was delivered. The fetal heart had been heard in right flank, 120 per minute, and a boy predicted.

Placenta immediately expelled by Credé's method, and total loss of blood in the labor estimated at a pint.

The after-treatment was the same as in ordinary labors, and mother and child did uninterruptedly well.

REPORT ON THE PROGRESS OF LARYNGOLOGY AND RHINOLOGY.

BY FRANKLIN H. HOOPER, M.D., BOSTON.

PHOTOGRAPHY OF THE LARYNX.

Among the progressive steps that have recently been taken in matters pertaining to this report, we must mention the perfection to which the art of photographing the human larynx has been brought, owing to the perseverance and skill of Dr. Thomas R. French, of Brooklyn, N. Y.

Dr. French read a paper on this subject at Copenhagen (International Medical Congress, August, 1884), and again, by invitation, last April before the College of Physicians, Philadelphia. We are indebted to the courtesy of the Committee on Publication of that society for the cuts accompanying this report.

In his paper the author states that he believes that photography of the larynx will prove of value. 1. By enabling us to obtain exact reproductions of the laryngeal image, thereby furnishing truthful illustrations for published reports of cases. 2. In the study of the physiology and the pathology of the larynx. 3. By enabling us to show photographs with the lantern for class-room instruction. The manner in which the larynx is photographed may be seen from this sketch (Fig. 1).

In the window is an instrument by means of which the sun's rays are concentrated. It consists of a hollow truncated cone of metal, ten inches long, in the large end of which is a double convex lens. In the small end is a plano-concave lens which intercepts the converging rays of the large lens and makes them parallel. The beam of light is caught upon the head-reflector, and reflected into the fauces of the subject.

In the examiner's right hand is seen the camera. Within the camera is a drop-shutter. This is governed