wise always to keep a watch for the approach of a cough, and to pinch the tube leading to the manometer when that is observed. Otherwise it is quite possible for some at least of the water in the manometer to be violently forced out. Which is a somewhat annoying accident, because the lumen of the manometer is sufficiently narrow to make the recharging it with liquid and getting rid of air-bubbles a somewhat troublesome business. Of course, the nitrogen should also be cut off immediately when a cough is imminent, because the act of coughing is very apt to displace the needle. When the patient has done coughing for the present, communication with the manometer should be reopened; but, until its readings are found to be satisfactory, no more gas should be admitted.

In doing a "refill" it is, of course, quite possible to meet with an atmospheric mean pressure in the pleural cavity if the final pressure at the previous operation was higher. But an atmospheric pressure should always be regarded with some suspicion, and special care must be taken to be sure that the point of the needle is in the right place. For this purpose, keeping a record of the depth reached by the needle, for use at subsequent operations, may be useful; but it is not wholly free from possible fallacies.

When it is found that the admission of a large quantity of gas does not raise the pressure, it is evident that this can only be because the gas is escaping as fast as it enters. This, of course, indicates that the opening of the needle is not in the pleural cavity, but in the lung. It has been suggested to scent the gas with peppermint or the like, in the expectation that the patient would recognize the odour in his own breath if the gas should be escaping in that way. In my experience this suggestion has not proved to be of any practical value.

On first inserting the needle, whether in a primary operation or a refill, we may find no movement of the manometer. This may be due simply to our having underestimated the thickness of the chest wall. In that case a little further insertion of the needle might produce normal oscillations. But it is far more often due to the opposite—namely, to going right through into lung. This is certain to happen if the puncture chances to be made at the site of an adhesion. And it may very easily happen anywhere near an adhesion, unless the needle is entered very slowly and cautiously, with the eye on the manometer all the time. On this account (as well as for other reasons) I am opposed to the practice of dispensing with local anaesthesia in refills, and entering the needle with a sudden stab. It by no means follows that the point which was free from adhesions at the first operation will be necessarily clear on the next occasion. This remark applies with especial emphasis when the puncture is made posteriorly, for there the lung may come into contact with the parietal pleura in spite of the presence of a very considerable quantity of gas, especially when the patient is lying on his back. The slight traumatism of the first operation would be very favourable to the production of an adhesion in such conditions. It is often difficult, if not impossible, to recognize the existence of such adhesions by auscultation.

It sometimes happens, when the needle is being entered for the first time, that the manometer leaps up to a normal *minus* pressure of 14 or 16, and there remains stationary. This is so far satisfactory, that it is a clear indication of the absence of adhesion at the point of puncture. The opening of the needle has been, at least momentarily, between two free pleural surfaces, in what may be called the potential pleural cavity. But it would be extremely unsafe to send in gas while the manometer is motionless. For though the *minus* pressure shows that the open end of the needle has been where we wish it to be, through the costal pleura, and pushing the visceral pleura before it, the absence of oscillations suggests that it may not be there still. It may be that some movement of the patient has caused the needle to be slightly withdrawn, so that its opening is now in the chest wall. It is more likely that it has gone through into the lung. It is therefore safer first to withdraw it until we are quite sure that its point is in the intercostal space. Then it may be very cautiously and slowly advanced again, the eye being fixed on the manometer. If still no oscillations occur it is probable that the lumen of the needle is blocked with blood. It is, of course, quite possible that this obstruction might be cleared away by injecting nitrogen. But the attempt would be very risky. In the absence of oscillations there

can be no proof that the open end of the needle is between the parietal and visceral pleura; and while this is uncertain, to inject nitrogen is to risk the possibility of gas embolism. In such circumstances it is recommended to clear the needle by passing in the stylet. But to do this with the ordinary Saugman needle is by no means free from danger. For with that instrument it is impossible to make way for the passage of the stylet without opening communication with the external air, which is, for more reasons than one, more dangerous than admitting nitrogen. To obviate this I have devised a needle with a stylet working through an airtight stuffing-box, as in Potain's aspirator. Only in Potain's instrument the stuffing-box simply plugs into the mount of the needle, which rarely produces an airtight joint. And besides, it is somewhat apt to tumble out at inopportune moments. In my instrument, therefore, the stuffing-box screws into the mount of the needle, with a leather washer to make a perfect joint. As supplied by the manufacturer, the stuffing-boxes in such instruments are provided with a packing made of leather or india-rubber. Leather is damaged by boiling, and india-rubber deteriorates by time, so that neither is reliable. I prefer a packing made of cotton-wool soaked in sterilized vaseline. This is perfectly airtight, and can easily be renewed whenever necessary. The leather washer for the joint should not be boiled. It may be soaked in B.P. glycerine or carbolic acid, not carbolic oil, which sterilizes nothing, not even itself. This special needle is made by Messrs. Allen and Hanbury of London, and by Messrs. Brady and Martin of Newcastle.

In using this needle, it is convenient to insert it without having the stuffing-box attached, because it is only occasionally that the stylet is required. It can easily be attached, with the needle *in situ*, if the occasion to use it arises.

In the absence of such a special needle, rather than use a stylet without a stuffing-box, it is far safer, in the circumstances just described, to withdraw the needle and reinsert it after clearing it thoroughly; or, better still, use a fresh needle. The slight additional traumatism of a second insertion is far less objectionable than the risks involved in making an open communication with the external air.

An abnormality which is at first somewhat puzzling is this: In the course of induction of a pneumothorax the pressure rises on the admission of a very small quantity of gas. But on shutting off the nitrogen and watching the manometer, we find that in the course of a minute or two it falls again. On repeating the process several times, we see that the pressure falls less after each admission of gas, so that eventually there is a permanent rise of pressure. I have seen this in three or four cases. In one the fall of pressure only took place when the patient took very deep breaths. No doubt this is due to gas being admitted into a small "pocket" surrounded and limited by adhesions, except for a narrow communication leading to a large intrapleural space. At the next operation it will be wise to attempt to enter this larger space directly. If auscultation and percussion do not help us to locate this larger space with sufficient clearness *x* rays may be found very useful. Some little care may be needed to distinguish between the phenomena just described and the manometric signs presented when the needle is in the lung. But in the lung there can never be a *minus* pressure during expiration; and the admission of gas will never produce a permanent rise of pressure.

A CASE OF ROTATORY NYSTAGMUS WITH RECOVERY UNDER OPTICAL TREATMENT.

BY

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In June, 1914, a girl, aged 7 years, was brought to me on account of defective vision. There was a slight convergent strabismus of the left eye, but the most striking objective sign was the presence of concomitant rotatory nystagmus, involving both eyes equally, and alleged to have existed from birth. The child was very fair and somewhat deaf, the latter being a sequel to otitis media acuta two years before. The visual acuity of each eye was $\frac{5}{16}$.

After the use of a mydriatic for eight days, retinoscopy gave the following results:

R. E.	+ 1	L. E.	+ 2.5
	+ 3		+ 4.5

Glasses were prescribed for constant use, namely:

Right eye + I. 50 D.C. ax. 80.
Left eye + O. 75 D.S. + I. 50 D.C. ax. 90.

On August 17th, 1915, the child was brought again, when it was found that the rotatory nystagmus had apparently completely disappeared. Confirmatory evidence was sought in an ophthalmoscopic examination by the direct method; this showed complete absence of oscillation in the right eye, with slight lateral movements in the left. The visual acuity of the right eye had risen with the correction to $\frac{1}{15}$ and partly $\frac{1}{12}$, while in the left eye it remained as before. The fundus of each eye showed, as might be expected, well-marked choroidal vessels.

The interest of this case is the disappearance of the nystagmus under optical treatment. It is true that Sym (*Diseases and Injuries of the Eye*) foreshadows such an improvement by the correction of any errors of refraction; according to May and Worth, however, "infantile cases (of nystagmus) are not amenable to treatment, though the condition sometimes becomes less marked with advancing years; the correction of high errors of refraction seldom improves vision."

Memoranda:

MEDICAL, SURGICAL, OBSTETRICAL.

CALCIUM HYPOCHLORITE SOLUTION AS A WOUND DRESSING.

I HAVE read with interest the article in the JOURNAL of July 24th on the antiseptic action of hypochlorous acid, by Professor J. Lorrain Smith, M.D., F.R.S., and others, and think it may interest some of your readers to know that for several years I have used a preparation of bleaching powder for dressing dirty wounds. As far as I can recollect, it is some fifteen or sixteen years since I read in the BRITISH MEDICAL JOURNAL an article contributed, I believe, by a Welsh doctor, saying that he found a 1 per cent. solution of calcium hypochlorite of the greatest value in the treatment of varicose ulcers of the leg. Having some difficulty in obtaining this, I prepared a solution of the salt from 3 drachms of bleaching powder, as sold in penny packets for domestic use, to which 20 oz. of water were added, making a solution of about 2 per cent. This is thoroughly dissolved, and after allowing the bleach to settle the clear supernatant fluid is poured off and is ready for use.

I have found it invaluable in the treatment of offensive sores, especially of tertiary syphilitic ulcers. For these, small pieces of lint soaked in the lotion are cut exactly the size of the sore, which is filled up level with the surrounding skin. A thin layer of cotton-wool is then applied to equalize pressure under a thin firm bandage. While the wound is dirty, the dressing must be changed three or four times daily, or oftener if required, but when the wound is clean it is sufficient if it be kept constantly moist, but on no account must an impermeable covering be applied. In the cases in which Dr. Louise McHroy and I have had opportunity of trying it we have found it entirely satisfactory.

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CEREBRO-SPINAL CONTACTS.

THE urgency of adopting some simple method in the treatment of contacts and others liable to infection by the germ of cerebro-spinal meningitis impels me to write suggesting an easy and, I hope, efficacious method of dealing with the problem—namely, inversion douching of the nose and naso-pharynx, as used by rhinologists, in lieu of spraying. The method is as follows:

The patient is placed in the supine position, the shoulders parallel with the end of the stretcher or couch (or rolled up knapsack), the head hanging vertically down, the neck muscles being relaxed to allow of this, so that the plane of the anterior nares is parallel with the ground, somewhat in the position in which some surgeons operate for post-nasal growths. The patient is now told to open the mouth, and to continue breathing through the mouth for the rest of the operation.

The solution to be used (say, for example, sanitas one part to five parts of warm normal saline solution, or potassium permanganate 1 in 1,000 in warm normal saline solution) is now poured into each nostril from some vessel with a lip, or from a douche-can with a rubber tube connexion, till the nose and naso-pharynx are filled with the solution, which will then overflow. Breathing comfortably through the mouth, the solution can now be retained from five to twenty minutes with practice.

The patient, when finished with, is told to turn quickly on his side, and the solution flowing out from the nose, is received into a vessel containing antiseptic solution.

Only two points need to be remembered: (1) Keep the head hanging as vertically as possible, else the solutions will flow down on to the base of the tongue and epiglottis and cause coughing; (2) the same result will happen if there be any attempt at nasal inspiration.

There is an obvious superiority in this method over that of spraying. As a spray falls on a vertical surface, those drops falling on the highest portion begin to roll down at once under the influence of gravity, their contact with that part being only momentary; also, a spray cannot penetrate and cover every part of the nose cavity and naso-pharynx, whereas by filling up the nose the whole interior is in contact with the solution almost at once, and as long as the head is kept in the correct position. Again, the necessity for the use of a spray, which is liable soon to get out of order, is done away with.

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COMPLETE AVULSION OF TESTIS.

ON August 26th, 1915, whilst acting as locumtenent for Dr. John Kirkwood, Kensal Rise, N.W., I was called to see a boy, C. C., aged 10 years, who had met with an accident, through falling from the branch of a tree on to an iron railing. I found an elliptical wound in the right scrotum, extending from the level of the spine of the pubes to nearly the base of the scrotum, and also some laceration of the inner side of the right thigh. After thorough cleansing of the scrotal wound, examination showed that the right testis was absent, and there was no trace of the spermatic cord on that side; the wound was thoroughly cleaned, the edges trimmed and brought together, and dressings applied. The following day the mother produced the missing testicle, which she had found in the boy's trousers (removed before I saw him). Attached to it was two inches of spermatic cord and some cotton lining from the inside of his trousers.

The scrotal wound is gradually healing, and so far the boy does not seem much the worse for his involuntary castration. There was a small amount of haemorrhage only, and very little shock.

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PUTTING THE TONGUE BEHIND THE SOFT PALATE.

SOME weeks ago a patient came to see me complaining of a muco-purulent discharge from his nose, which he said he thought was due to nasal polypi. I examined his nose and throat, and could find nothing more than a post-nasal catarrh; however, he was not satisfied, and said he was certain that he had polypi because he could feel them. On my asking how he could do so, he at once put his tongue right up behind his soft palate into the naso-pharynx; he said he could then feel a ridge in the middle and a soft mass on each side (no doubt the posterior ends of the turbinates), which he thought were polypi. The appearance on looking into his mouth during this manoeuvre was most peculiar; the soft palate was bulged forwards, and the tongue pushed up so far behind it that the uvula was in