reported a reappearance of the swelling, when, upon examination, a lump about the size of a hen's egg was observed in the right perinæum, extending posteriorly to within half an inch of the anus. It was irreducible, but mobile, and very tender upon the slightest pressure. It had the feeling and general outline of an inflamed testicle; and the cord, slightly enlarged, could be felt extending from the swelling up to the groin. The skin over the swelling was slightly reddened. The bowels were naturally opened, and there was no return of the hernia or hydrocele.

[The accompanying woodcut, for which I am indebted to my friend Mr. Basil Walker, House-Surgeon at the London Hospital, very well illustrates the external appearance of the swelling. It was sketched from a wax cast which I made of the perinæum at this time.]

September 17th. Ice was now applied locally, and the swelling subsequently became reduced in size and less painful.

September 30th. The child looked pallid, and appeared to have suffered much pain. The testis now felt hard, smooth, ovoid, measuring two inches in its long diameter; it had become fixed, and the tissues covering it were slightly thickened by the recent inflammation. It was less painful upon manipulation than formerly. The cord felt running up to the groin was not appreciably enlarged. The right inguinal canal was rather patent, and invagination of the skin caused considerable pain. The right scrotum remained empty; the left contained a testicle.

October 1st. The patient was discharged, the mother being told to bring it to the hospital for periodical examination; at the same time, it was suggested that the testicle ought to be excised, if the child continued in pain or had its natural movements impeded.

January 26th, 1883. The right testicle is still in perinæum, of normal shape and size; there is now only a slight perineal prominence to indicate its position. The hernia is constantly slipping up and down. The left testis is normally placed in the scrotum. The child enjoys good health. He plays much without pain or inconvenience.

REMARKS.—The position and character of the swelling upon admission at once excited attention, as did also the absence of the right testicle from its proper scrotal compartment. The ease with which the hernia was reduced after tapping, and the inflammatory character of the fluid withdrawn, at first suggested to my mind that we were dealing with a case in which the hernial sac had become inflamed and dropsical, the tight constriction above rendering the reduction of the fluid impossible. The subsequent appearance of an acute orchitis in the misplaced testicle made it more probable that the fluid withdrawn really came from a traumatically inflamed tunica vaginalis, the orchitis being due to the same cause, or else to accidental puncture of the testicle in tapping. The lump previously noticed by the mother as "often slipping into the abdomen" was without doubt the hernia; for, after tapping, the testicle, as indistinctly felt in the perinæum, was of much too small a size to correspond with that described by the mother. In other words, the hernia was congenital, into an unobliterated funicular process of peritoneum; the hydrocele and orchitis being of traumatic origin, due to recent injury.

The Amersham Guardians and Rural Sanitary Authority, on re-appointing the Medical Officer of Health, have reduced his salary from £100 to £50 per annum.

CASE OF DIPHTHERIA: TRACHEOTOMY.*

By W. H. FOLKER, F.R.C.S.Eng.,

Surgeon to the North Staffordshire Infirmary, Hanley.

THE following case of tracheotomy occurred in a child aged 6 years, and is the more interesting, as it was complicated with bronchocele. The child, a female, had been attended homœopathically for several days for an attack of diphtheria; but, the false membrane beginning to invade the larynx, and rendering breathing very difficult, the case was handed over to my care on January 30th, 1883.

It was at once evident that an immediate operation was necessary to save the little patient's life; for her pulse was sinking; she was blue-looking, and almost suffocated. The arches of the palate, and the pharynx as far as could be seen, were covered with the usual brownish-looking false membrane.

The child, being placed on a table for operation, with the neck and shoulders raised on a pillow, and the head thrown slightly back, was found to have a goitre of considerable size, very congested, and traversed by several large veins. An incision through the skin was made in the mesial line, of about an inch and a half, which exposed a complete meshwork of veins of considerable thickness, and some of which seemed to bleed by merely being touched. Where the larger ones could be traced, an aneurysmal needle was passed, and a ligature placed above and below before the vein was divided; but, notwithstanding the greatest care and caution, the hæmorrhage was most profuse, and from twenty to twenty-five ligatures had to be applied before the trachea was reached. The parts being now carefully sponged dry, the trachea was opened just below the cricoid cartilage; but so deeply was it situated, that the usual sized tube for a child would not reach; the tracheal opening was therefore enlarged, and a full-sized tube inserted. This was fastened round the neck by tapes previously attached, and two sutures applied to the lower part of the wound, closing it so that nothing but the entry of the tube was visible. The operation occupied more than an hour, during which time the child was just kept under the influence of chloroform. The temperature of the room was 70° Fahr., and the atmosphere was kept moistened by steam from a bronchitis-kettle.

The relief afforded by the operation was immediate; the pulse rallied; the natural colour was restored; and in a short time the little patient had a quiet sleep. The entry of the tube was kept covered with a piece of gauze; and several small pieces of sponge mounted on thin wire, were constantly kept handy, to remove any mucus that might be coughed into the tube.

In the evening, I found the child breathing quietly through the tube, although troubled with frequent coughing. She had taken some milk several times during the day.

On the 31st, she had passed a fairly good night. The cough was still troublesome, thick tenacious phlegm at times filling the tube, and requiring instant removal. The throat, being still coated, was mopped out with sulphurous acid. On February 1st, the throat being still coated, the sulphurous acid was again applied. The breathing and cough were about the same. She took milk and Brand's beef-essence fairly well. On February 2nd, the throat was clean; no further application was required. The tongue was furred. The bowels were open. The cough was troublesome; and the phlegm very thick and sticky, and difficult to remove. On the 3rd, all the symptoms were about the same; but she looked better in the face, was cheerful, and took her food better. On February 4th, she did not look quite so well. I removed the inner tube, and closed the outer one with a small cork, and found she could not breathe. Then, thinking the hole on the convexity of the tube might be too small, or have become blocked, I removed it altogether; but it produced such distress, that I was obliged to reintroduce it at once. Whilst it was out, I noticed that the wound did not look very well. It was coated over with a film, but not of the dirty brown colour of diphtheritic deposit. The edges looked reddish, and the stitches seemed giving way. On the 5th, she was not quite so well; looked paler and weaker. The stitches had given way. I ordered the wound to be painted over with carbolic oil three or four times a day. On February 6th, the nurse reported that a little milk had been coughed up through the tube very soon after swallowing it. I tried her with some milk, and found it as the nurse had said; so that the pressure of the tube had evidently caused it to ulcerate through to the œsophagus. She could swallow solid food very well. I removed the tube, which made hardly any difference to the

* Read before the Staffordshire Branch.

breathing; it was, therefore, left out. The wound was gaping, and looking more diphtheritic. The cough was troublesome; the phlegm was tough and copious. I ordered perchloride of iron and oxymel of squills, and half an ounce of port wine after dinner. On the 10th, she was much better; the wound looked cleaner. On February 11th, no milk came through the opening. She spoke audibly to-day for the first time. On the 13th, the cough was better; she looked quite bright, and was delighted at being able to speak aloud again. On the 15th, some phlegm still came through the opening; but, by gently pressing the neck with her own fingers, she could now cough part of it up through the mouth. I applied a strip of adhesive plaster across the top of the wound, to draw it a little together, but leaving a portion at the lower part, to allow any discharge to escape. On the 17th, I changed and tightened the plaster. The wound was closer, but she was still coughing up something through it. On the 19th, she was not so well; looked paler. The cough was more troublesome. Bronchial *râles* were heard. The tongue was furred. The bowels were not open. I ordered an enema of soap and water, and a mixture of bicarbonate of soda, ammonia, ipecacuanha wine, and liquor opii sedativus. The enema made her very faint, so the mother gave her a teaspoonful of brandy and a little water. On the 21st, very little came through the opening. The tongue was furred, and bowels not moved. I ordered the mixture to be repeated, and a rhubarb and grey powder to be taken. On the 23rd, she was about the same. The mixture and powder were repeated. On the 26th, I completely covered the opening with adhesive plaster. The cough was better. On the 28th, the wound was healed. Bronchitis was still present. After this, anæmia set in, for which iron was prescribed, but very little was ever taken. After a while, the appetite failed considerably; and, on March 13th, suffocative bronchorrhœa set in, of which the little patient died early on the 15th.

I was much grieved at losing the case after all; for, after the first few days, I had been very full of hope that it would have gone on to a successful issue, although I regard such an operation as always much more dangerous when performed for the relief of diphtheria than when performed for croup. The relief to the breathing was immediate; the appetite and strength were restored; the voice returned on the thirteenth day; and ultimately the tube was removed. The complication, owing to the perforation of the œsophagus, was overcome, and the wound closed; the bronchocœle disappeared; and yet, a fortnight after that, the little patient sank and died.

Another time, I shall certainly use a tube without a hole in the upper part of it; for I think the difficulty of removing the tube in the first instance was due to the membrane projecting through the aperture, and possibly granulating. I do not see any use in having an upper opening in the tube; and in this case it was a positive disadvantage, for, had it not delayed its withdrawal, possibly the œsophageal perforation might have been avoided.

As tracheotomy cannot at present be considered a very successful operation in this country, it is perhaps well that all cases should be carefully and minutely recorded, so that faults may be avoided and improvements arrived at both in the operation and treatment.

THE TREATMENT OF EMPYEMA: FREE INCISION VERSUS ASPIRATION.

By JOHN WARD COUSINS, M.D.Lond., F.R.C.S.,
Surgeon to the Royal Portsmouth Hospital.

THE great improvement in the surgical treatment of wounds has been especially utilised in the management of chest operations. During the last few years, free incision in empyema has been extensively and successfully employed, although many surgeons still regard it as a radical measure, and are disposed to try other modes of procedure before resorting to it. It is now a well recognised rule of practice, that any collection of pus within the pleural cavity must be evacuated outwardly without loss of time. The moment for operating in each case must, of course, depend upon the judgment of the surgeon. The occurrence of dyspnoea, and cardiac distress, are always positive indications for immediate action, for delay may suddenly be followed by fatal syncope, or the abscess may burst into the bronchi, and cause suffocation.

When, however, the necessity for some operation has been decided, and the diagnosis of purulent effusion made certain by exploration, the practitioner is sometimes in doubt as to the best method of proceeding. He has to make a selection between tapping with the trocar and cannula, evacuation by the aspirator, simple puncture, or free incision of the chest-cavity with the knife. In a valuable

paper recently published in the BRITISH MEDICAL JOURNAL, Mr. R. W. Parker proposes a novel method of aspiration, which he suggests should be adopted before proceeding to the radical operation. He advocates the trial of aspiration, supplemented by the injection of purified air into the pleural cavity for the purpose of ensuring the complete dislodgement of the fluid. During the last few years, a somewhat similar method of clearing out the chest by the injection of air and disinfecting fluids has been practised by Continental surgeons. The ordinary aspirator often fails, and the tube becomes blocked up with shreds of fibrine and flaky masses; and so a force beyond the elasticity of the walls of the cavity, and the power of the evacuator, is necessary to expel the fluid through the narrow outlet.

But the question to settle is whether, after all, aspiration is the best and safest method of emptying the chest in empyema. Aspiration is a prolonged operation; and this is a serious matter for consideration when the patient is in a condition of exhaustion and distress. The operation, too, must be repeated several times in ordinary cases, to remove the reaccumulation of pus which is sure to occur. There may be exceptional cases, as Mr. Parker suggests, in which a preliminary procedure is admissible, from the extensive nature of the effusion, or the critical condition of the patient; still, it must be remembered that free incision is the measure which, in the large majority of cases, must at length be adopted.

On the other hand, free incision requires no repetition. It can be safely practised at every period of life, and for every variety of empyema—associated, of course, always with Listerian precautions. The little operation can be rapidly performed with my antiseptic trocar,¹ which is convertible into a probe-pointed knife without withdrawal from the chest; and, when performed in this way, it is certainly not a severe measure. In many cases, the ascent of the diaphragm and the contraction of the walls of the cavity are sufficient to drive out the imprisoned fluid; and then, during the after-treatment, the abscess can be kept open by careful drainage, attention to position, and the judicious application of disinfecting remedies.

There are cases, however, even after the operation of free incision, in which it is difficult to empty and deodorise the pleural abscess; for the presence of a little stagnant pus is quite sufficient to keep up a foul condition of the cavity. Sometimes shreds of fibrine and membranous exudation, infiltrated with purulent deposit, obstruct the discharge, and gravitate to the dependent parts of the sac; and thus the cleansing process is rendered a very troublesome matter, even with frequent disinfecting washings. It is often a good plan, under these conditions, to employ a syringe fitted with a long and flexible tube, that can be introduced to the bottom of the pleural cavity, and thus to remove and wash away the fluid which has accumulated at the lowest part.

In other cases, the abscess-cavity is irregular, and is subdivided into several sacs by the remnants of old adhesions, or by bands of recent lymph; and it appears to me that, especially under these circumstances, the injection of purified air is likely to prove of great practical utility; and, for this method, the pleural incision can be readily made air-tight by an India-rubber pad.² Mr. Parker suggests "that the air should be injected into the pleural cavity in sufficient quantity to expel all the fluid.....The moment the out-flow ceases—provided always the physical signs indicate that the cavity is not emptied—introduce the needle, and pump in a little air." Now, with ordinary care, this little operation will be free from all risk and danger to the patient, and the purified air can be steadily injected so as to avoid any sudden and severe increase of pressure; otherwise, uniting surfaces and freshly formed adhesions may be torn asunder, and the healing process of contraction may be seriously disturbed.

¹ See BRITISH MEDICAL JOURNAL, March 10th, 1883.

² The drainage-tube and pad, described at page 1075 of the BRITISH MEDICAL JOURNAL, June 2nd, 1883, would be a convenient instrument for this purpose.

ECZEMA OF THE FACE.—In their work on the diagnosis and treatment of ocular affections, Messrs. Galezowski and Dagnuet recommend, against the eczematous and impetiginous eruptions which often show themselves on the lids and nose of young patients suffering from phlyctenular keratitis, either calomel in powder, or the following ointment: Olei cadini 0.25 gr.; hydrarg. oxid. rubr. 0.10 gr.; camphoræ 0.25 gr.; vaselini 10 gr. However, when there are many scabs, the best treatment consists in removing them with a forceps, and touching the denuded surface with a stick of nitrate of silver. The excess of caustic can be neutralised by the application of a solution of common salt.