satisfactory which come under the notice of the practitioner. In spite of the most skilful treatment, a large proportion of them prove fatal. This case is no exception; but failures are often more instructive than successes, and there are some points in the history of this which make it worth adding to the general stock of professional experience.

The first time I tapped this patient, I did not expect to see pus flow into the aspirator. He was robust, well made and well fed, and was altogether an exceedingly favourable specimen of an agricultural labourer. He was very temperate, and had never had a day's illness in his life. There was nothing, in fact, to lead one to anticipate anything more than an ordinary pleuritic effusion. The aspirator used was Weiss's, and had the disadvantage of not presenting any means of clearing the needle by reversing the current. It was necessary, therefore, either to withdraw the needle each time that it became obstructed, or to inject fluid through it in order to drive back the obstruction. To do the first caused the patient much pain, and the second of these courses was adopted. Notwithstanding that every precaution was taken against the admission of air, the pus became after this very offensive. Possibly the air dissolved in the water injected might be sufficient to account for the change. The relief afforded by each tapping was most marked, and the patient himself always begged to have the operation repeated. After the injection of the carbolic solution, the formation of pus was evidently checked. So far as the empyema was concerned, the treatment was not unsuccessful. Why, notwithstanding this, the man continued to sink, I cannot say. Probably there was deposition of tubercle going on in the pneumonic lung. Unfortunately, no *post mortem* examination could be obtained to clear up this doubt.

CASE OF PARACENTESIS THORACIS; WITH REMARKS,

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THE following case is instructive, as showing the value of a free incision into the pleural cavity in a severe case of empyema where the wound made by the trocar in tapping was ultimately found insufficient to allow the contents to escape freely, much less to permit other substances mentioned below to pass; while these would have acted as foreign bodies in the pleural cavity, keeping up suppuration, which would have destroyed the patient by hectic. No means existed of ascertaining their presence beforehand; but, being dissatisfied with the progress of the case, I adopted another plan, and, fortunately, with the best results. There was nothing exceptional in the medical treatment.

Mr. D., aged 58, married, dyspeptic, of nervous temperament, whose brother died of phthisis "brought on by a cold", but whose father and mother are still in good health, was on March 7th suddenly seized with such severe pain in the chest and left side, with palpitation of the heart, that a practitioner considered the case one of angina, and gave stimulants and opium freely with great relief. In a few hours, the excitement subsided, and a sharp attack of pleurisy was easily diagnosed. The following will give a fair history of the first week of illness (up to March 14th). The pulse ranged from 100 to 120; the temperature, 100.4 to 102 deg.; the respirations were not over 30 per minute. The left side was dull to the clavicle. The apex-beat of the heart was close to the left side of the sternum. He perspired profusely. His cough was troublesome; and expectoration scanty, white, glairy, with a little yellow mucus.—March 16th. Pulse 114; temperature 102 deg.; respirations 30. He was lying easily. The bowels were moved twice. He was perspiring profusely.—March 17th. Pulse 120; respirations 27; temperature 101.3 deg. He was perspiring still. The bowels were not moved. The apex-beat of the heart was on the right side of the sternum. His appetite was fairly good.—March 18th. Pulse 110; temperature 102.1 deg.; respirations 30. The apex-beat was on the right side of the sternum. Perspiration was profuse. The bowels were moved twice. Dr. John Cameron met me in consultation. We agreed to continue the diuretics, etc.—March 20th. The bowels were moved twice; there was blood in the stools. He passed a pint and a half of urine. A blister was applied to the side.—March 21st. He had a rigor this morning at five o'clock, and perspired profusely since. Pulse 120, feeble; respirations 30. The bowels were moved twice.—March 24th. He had another rigor this morning. The bowels were purged four times daily since the 21st. He perspired profusely. The abdomen was tympanitic. Pulse 120; respirations 30. The expectoration was scanty, free from odour, and of the same colour. He took food moderately well. Stimulants and opium were freely given.—March 25th. Pulse 120, feeble; respirations 30. The tongue (which had been furred throughout) was now covered with aphthous ulcers. The bowels

had been purged three times. The abdomen was tympanitic. The cough and expectoration were the same. He was restless at night, with slight delirium.—March 27th. Dr. Cameron met me again in consultation; and, with his assistance and that of my partner Dr. Crookshank, paracentesis thoracis was performed, and 108 ounces of pus removed, which was so offensive that the door and windows of the room had to be thrown open. Fortunately, we were using the aspirator, and could convey the fluid into a basin containing a solution of carbolic acid; yet it needed, as was remarked, a pathological nose to bear the smell with indifference. The patient bore the operation very well, and expressed himself relieved. Pulse 100, fuller. Opium, ammonia, brandy, etc., were given.—March 28th. He had had a moderately good night. The bowels were moved twice. Everything else was the same. At 9 P.M., pulse 100; respirations 32; temperature 101.2 deg. The bowels had been moved once. The cough and expectoration were the same.—March 30th. Pulse 96; respirations 28; temperature 101 deg. The tongue was nearly healed. The bowels had been moved four times. He passed three pints of urine.—April 1st. He had a restless night, and did not feel so well. Pulse 108; respirations 28; temperature 101.2 deg. He passed three pints of urine.—April 2nd. I removed with an ordinary trocar and cannula not less than fifty ounces of the same offensive pus, and introduced a Chassaignac's tube, covering all with a poultice.—April 3rd. His cough was very troublesome from the time he was tapped until 2 A.M. The expectoration was still colourless and odourless. Pulse 110; respirations 28; temperature 100 deg.; tongue clean; urine abundant.—April 6th. He complained that the tube hurt him; and, as but little, if any, matter came through it, I removed it, and injected a weak solution of carbolic acid into the pleural cavity, alternately with sulphurous acid, every night and morning.—April 9th. The discharge was now profuse, saturating poultice and bed-linen; and, as the odour was the same, the poor fellow suffered greatly from this discomfort. A large soft sponge, squeezed out of hot water and covered with gutta percha, was found much more comfortable than the poultice, and retained more of the pus. Pulse 130; respirations 28; temperature 101.1 deg.; bowels purged four times. He took food freely, with stimulants, opium, and quinine.—April 15th. The bowels were still purged from four to six times daily. Pulse 120; respirations 24. The side discharged freely, but the wound was contracting. The smell was still very offensive.—April 17th. As it was evident that something more must be done, I introduced a probe-pointed bistoury, and made an incision one and a half inches long backward from the abdomen, giving exit to a quantity of offensive pus; and twice daily afterwards I washed the pleural cavity with a weak solution of sulphurous acid (which acted much better than the carbolic acid), using from twenty to thirty ounces at each washing; and on two occasions a large piece of substance was removed, probably coagulated lymph or coagulated blood, horribly offensive.—April 24th. Laudable pus escaped on to the sponge for the first time.—April 28th. Water injected into the pleural cavity returned colourless. The injections were therefore stopped, and the wound allowed to close.—April 30th. I removed him to Waterloo (a quiet place on the sea-shore, a few miles from Liverpool), and dismissed him cured on June 1st, with the heart returned to its normal site, and with a fair amount of respiration in the upper half of the side.

I wish to draw attention to the unusual severity of this case, as pleurisy in private practice does not generally give rise to much anxiety. In time, with due care and patience, the fluid is absorbed, and all ends well. I know that early tapping with the aspirator is recommended even when we are morally certain the fluid is only serum; but I would be slow to adopt such a course, believing that the fluid will reaccumulate, and probably become purulent. In my case, it will be observed, surgical interference was demanded, because of the remarkable constitutional disturbance; and this within three weeks of the attack. Dr. Cameron was deeply impressed with the typhoid character of the symptoms on the day of the operation; viz., the low delirium, sleeplessness, diarrhoea, and tympanitic abdomen, aphthous tongue, and profuse perspiration, all due, as the result proved, to the presence of fetid pus in the pleural cavity, as the tongue healed rapidly after the tapping, and the perspiration, diarrhoea, and tympanitis abated, but gave trouble subsequently; and the urine, which had been scanty, became abundant.

Another point of interest is the fœtor of the pus on the occasion of the *first* tapping, seeing that there was no fistulous communication between the lung and pleural cavity. Must we presume the presence of air essential to this alteration in the pus? If so, did it pass by endosmosis through the unbroken tissue? or may chemical decomposition take place in a warm shut sac without the presence of air? The rapid improvement after the incision was most gratifying, and would encourage me to adopt a similar course earlier for the future.