his guard. The feigning madman either breaks down in or overdoes his part; for every case of real madness is a consistent whole, and to imitate it well requires great intelligence, great endurance, and great dramatic power.

A CASE OF SCALD OF THE GLOTTIS, WITH RECOVERY AFTER TRACHEOTOMY.*

By T. SYMPSON, F.R.C.S.,
President of the Midland Branch.

ON December 9th, 1874, at about 7 P.M., I received an urgent message to visit a boy, aged 2½ years, living with his father on the Burton Road. On my arrival, I found the patient extremely restless, and breathing very rapidly, inspiration being accompanied by a harsh croupy sound. The lips, the tongue, and the inside of the cheeks and throat, were swollen, red, and blistered. The face was livid, the extremities were cold, the skin cool and clammy, and the pulse was feeble, and too rapid to be counted.

I was informed that, two hours previously, during the temporary absence of the housekeeper from the room, the child had drunk through the spout of a teapot some very hot water which had just been poured out of a kettle. For some time, he did not seem to suffer much; but, during the last half-hour, the symptoms had become alarming. As the performance of tracheotomy evidently offered the only chance of saving life, I sent to the hospital for our excellent house-surgeon, Mr. Lill, and, with his assistance, commenced the operation at 7.30, but had scarcely completed my first incision when the child ceased to breathe, and became livid, cold, and pulseless. I rapidly opened the trachea and inserted a cannula, through which Mr. Lill sucked out the blood from the air-tubes; and then artificial respiration was practised after Silvester's method, whilst vigorous friction was applied to the extremities by the attendants. In about ten minutes, the child gave a gasp, which was soon followed by others; and, at the end of an hour, we had the extreme gratification of finding respiration well established through the tube, warmth restored to the surface, and the heart beating perceptibly, though very feebly. The occurrence of reaction appeared to have been considerably hastened by the frequent administration of strong brandy and water. At midnight, the child was composed, and had slept quietly at intervals. He was ordered to take milk and beef-tea at short intervals; the temperature of the room to be kept at about 60 deg., and the air to be moistened by steam from a kettle having a long tube attached to its spout.

He progressed favourably until early on the morning of the 14th, when I was requested to visit him. On seeing him at 3.30, he appeared moribund; he had urgent dyspnoea, extreme restlessness, a clammy cold skin, and no pulse; and his lips and cheeks were livid. On removing the tube, I found it almost entirely blocked up by mucus, which I cleared out with a feather. I reintroduced the tube, employed artificial respiration, placed the child in a hot bath, and had sinapisms applied to the chest, with speedy relief to all the symptoms. The report in the evening was to the effect that he had appeared comfortable during the day; had breathed quietly through the tube, and had taken nourishment freely.

He went on well until the night of the 17th, when, at 11.30, he had become very fretful, and suffered from dyspnoea and frequent violent paroxysms of cough. The *alae nasi* were dilated, and there was marked retraction of the abdominal parietes and intercostal spaces during inspiration. On auscultation, fine crepitation was audible over the whole lower lobe of the left lung, and bronchial breathing near the spine. There was some dullness on percussion of the lower left half of the chest, posteriorly. Respiration could not be counted, on account of the cough. Pulse, 150; temperature, 103. A large linseed-meal poultice sprinkled with mustard was ordered to be applied to the side after the child had been placed in a hot bath. A mixture, containing ipecacuanha, spirit of nitrous ether, and solution of citrate of ammonia, was ordered to be taken every three hours.

These formidable symptoms appeared to be due to a chill, owing to the fire in the room in which the child lay having been allowed to go out, in consequence of a down draught in the chimney. The weather was extremely cold, and the wind very boisterous.

On the 18th, the paroxysms of cough were less frequent, and were accompanied by copious white frothy expectoration. Respiration was more free. Loud mucous *râles* were heard in the trachea. There was large crepitation over the lower half of the left side. Less dullness on percussion. Pulse, 136; temperature, 100. On the 19th, the child

had passed a quiet night. The cough was neither so frequent nor so violent, and attended with less expectoration. Pulse, 120; temperature, 99. The tube was removed, and the wound was found to be granulating healthily. From this date, the child progressed uninterruptedly towards recovery. He began to speak on the 23rd, and the wound had healed by the 30th.

The case I have just related presents various points of extreme interest, not the least of which is the survival of the patient; for we know that recovery is a very rare event when, from the severity of the symptoms in cases of scald of the glottis, it is deemed necessary to open the trachea; in proof of which I may cite the fact stated by Durham in the second volume of Holmes's *System of Surgery*, that, "out of twenty-eight cases of tracheotomy in scald of the larynx (of which he had notes), twenty-three terminated fatally".

Other noteworthy facts are the occurrence of apparent death just prior to the trachea being opened, and the gratifying result of perseverance in the practice of artificial respiration; the narrow escape from suffocation due to want of attention to the state of the tube on the 14th; the sharp attack of pneumonia, induced by sudden change of temperature in the room on the 17th; and the state of the general health of the little patient, who was delicate, rickety, often suffered from attacks of bronchitis, and who had fractured his femur a year ago, from which, however, he made a good recovery.

In conclusion, I would just remark, that occasionally recovery takes place in these cases independently of the performance of tracheotomy, even when they appear in a very desperate condition. One such instance fell to my lot some years ago in the parish of Nettleham, where the parents of the child refused their consent to the operation, but where a good result was obtained by the application of hot mustard and linseed-meal poultices to the front of the chest, the administration of frequent small doses of calomel, and of nourishment in the form of brandy and milk given at short intervals.

CASE OF PARACENTESIS PERICARDII: IODINE INJECTIONS.

By G. E. MOORE, M.R.C.S.,
House-Physician to King's College Hospital.

THE following case of suppurative pericarditis occurred in the practice of Mr. E. Pearl of Windsor, who kindly permitted me to watch and share the treatment with him.

I need not detail the pericarditic symptoms; suffice it to say, that the patient, a strong lad, aged 13 years, living in Windsor, was taken ill on the 15th of last October; that ten days after a loud "to and fro" friction-sound was heard, which was soon followed by extension of the area of pericardial dullness; that, from October 27th until November 7th, he gradually got worse, in spite of the application of all the ordinary methods of treatment; and that the heart-sounds became fainter and more distant, with gradual diminution, ending in complete subsidence of the pericardial rub. An abscess formed on the dorsum of each foot in the second week of the disease.

On November 8th, Dr. George Johnson was called in consultation. He diagnosed suppurative pericarditis, and agreed in the proposal to perform paracentesis, as, under ordinary treatment, the case was sure to prove fatal.

On November 9th, before the first operation, the boy was very exhausted, and desirous of some relief. There was great dyspnoea. Respirations 50 in a minute; pulse 160, very irregular. The præcordium was prominent. The heart-sounds were a confused murmur, heard only at the base. There was extensive pericardial dullness. Paracentesis was performed by Mr. J. W. Gooch of Eton with the aspirator, the previously formed vacuum being put in communication with the needle as soon as the distal aperture had passed through the skin. The puncture was made in the fifth left intercostal space, just internal to the normal situation of the heart's apex, and the needle was directed inwards, upwards, and a little backwards. By this means, twenty-one ounces of purulent fluid were drawn off. During the withdrawal of the fluid, the patient complained only of the needle pricking in the skin; there was not the least symptom of syncope, and he expressed himself as much relieved. Immediately afterwards, the respirations came down to 30 a minute. The pulse was 120, much stronger and regular. For about twenty minutes, there lasted an incessant cough, with a little viscid frothy sputum. Normal heart-sounds could be heard both at the base and apex. The pericardial dullness was diminished to almost the normal limits.

On the 10th and 11th, he seemed much better.

* Read at a quarterly meeting of the Midland Branch held on May 5th.

On the 13th, the pulse was again irregular, intermitting every third beat.

On the 14th, the physical signs indicated great increase in the fluid; and the operation was done a second time, thirty-five ounces being drawn off. The patient again expressed himself as greatly relieved.

On the 15th, the boy seemed much better. He had passed a good night; and symptoms of cedema of the left lung, which had previously appeared, were less marked.

From the 16th to the 20th, he gradually relapsed, and an offensive and exhausting diarrhoea came on, which was checked by a little chalk mixture.

On the 21st, the dulness then extending up to the clavicle and quite round from the right mamma to the spine behind, paracentesis was again done for the third time, and sixty ounces of purulent fluid were drawn off. We then injected slowly, by reversing the action of the aspirator, two ounces of a mixture of one part of tincture of iodine to two parts of water, previously warmed to the temperature of the body. We intended to remove half this; but, on setting the vacuum in communication with the pericardial cavity, air entered by the side of the needle, which, from the longer retention than usual, had become loose. The needle was then withdrawn, and the injection left in the pericardial sac. The patient complained of no pain at the time, and was not aware until afterwards that anything had been injected. During the next half-hour, he expressed himself as much relieved, and in no pain. Pulse, 118; respiration, 28. The cough came on for a short time as before.

On the 22nd and 23rd, the patient seemed much better; his appetite improved, and his pulse became stronger and more regular. The air which had entered the pericardium gave rise to a tympanic note on percussion, and the "mill-wheel" sound was heard all over the front of the chest, quite obliterating the normal heart-sounds. This continued until the 27th, when sudden symptoms of increase in the effusion were observed.

On the 30th, his parents described him as having had fits of syncope, in which he became quite livid. His breathing was very laboured. A friction-sound, synchronous with the respiration, was then heard at the front of the base of the left lung.

The next day, December 1st, we tapped for the fourth time, making the puncture as nearly as possible at the same spot, but avoiding the old ones, and drawing off fifty ounces of pus and the little air that had entered at the last operation. There was no offensive odour. This was followed up by an injection of two ounces of a solution of equal parts of tincture of iodine and water. The operation was again attended by temporary relief. Pain, with slight swelling, was then noticed over the right hip-joint. The abscesses on the feet had healed up.

The boy seemed better for a day or two, sitting up and eating well; but, on December 4th, without waiting for the symptoms of pericardial distension, we tapped for the fifth time, drawing off thirty ounces of greenish pus and injecting the iodine. This was repeated on the 7th, when only nine ounces were drawn off, the solution injected consisting this time of two parts of tincture of iodine to one part of water. There was no pain at the time, but a transient sensation of warmth was felt soon afterwards. But the patient did not get better; he had profuse sweats at night, and there was slight fluctuation over the right trochanter. He remained in much the same condition until the 10th, supported by a generous diet, port wine, iron, and quinine; the heart-sounds being audible at the base and apex, and the area of pericardial dulness almost normal. There was complete absence of breath-sounds, with dulness on percussion over a space behind corresponding to the upper part of the lower lobe of the left lung.

After this, the patient rapidly became worse. Symptoms of peritonitis appeared, with vomiting and diarrhoea, proving fatal on December 17th.

At a *post mortem* examination made the day afterwards, on removing the sternum, the anterior part of the lower lobe of the left lung was found bound down by adhesions over the front of the pericardium, and was crepitant to the finger. The pericardium itself, distended by about a pint of thick pus, extended backwards to the posterior wall of the thorax; it was much thickened, and covered by soft purulent lymph. The posterior part of the lower lobe was completely collapsed and pushed away from the spinal column by the distended pericardium. The heart itself was pale and softened, the microscope showing fatty degeneration of the muscular fibre. In the abdomen, the peritoneum was very injected, covered in places by purulent lymph, and contained a small quantity of fluid. The liver was congested and fatty, the kidneys congested.

REMARKS.—The operation of paracentesis pericardii has been done many times; but I believe this to be the second case only in which iodine injections have been used. The other case, mentioned by

Trousseau, was done by Aran of Paris twenty years ago. Many objections naturally obtruded themselves on what may seem to some a rash line of treatment, but I was led to propose the injection of iodine for the following reasons; the case was analogous to that of empyema; there was already one instance on record in which that mode of treatment had been successful; and, lastly, by the kindness and assistance of Dr. Rutherford, I was enabled experimentally to demonstrate, in the King's College Laboratory, the immediate effect upon the pulse of stimulation of the pericardium. We found, in two experiments, one on a cat, the other on a dog, that, on pinching the pericardium, there was a distinct inhibition of the heart's action (a fact before noticed by Dr. Rutherford), being most marked when the visceral layer was excited, but also observed when the parietal layer was stimulated; and that, on injecting thirty minims of the pharmacopœial tincture of iodine, there was transient retardation of the pulse with slight increase in the arterial blood-pressure (4-10 millimètres of the mercurial column). These effects of pericardial stimulation did not, however, appear of sufficient gravity to contraindicate the operation.

SURGICAL MEMORANDA.

LEAD PELLETS SUBSTITUTED FOR PHARYNGEAL FORCEPS IN SEARCH OF IMPACTED BONE IN THE ŒSOPHAGUS, WITH SUCCESSFUL RESULT.

THE following history illustrates one of those cases where the surgeon is at times placed in a dilemma, while he also must exercise the most peremptory means in his power for the recovery if possible of his patient. On Tuesday, the 11th ult., I was requested by a farmer to go hurriedly and visit his wife, Mrs. M— of this parish, who, to use his own provincialism, was afraid she would "soon be fettin away" unless relief was very soon procured. On hastening to the house, I certainly found the patient in a very distressing condition. The countenance had a very characteristic expression of anxiety, and great weakness had resulted from the deficient supply of nourishment for four days previously. While she was eating a piece of rabbit-pie for dinner, by some unaccountable means part of the shoulder-blade became lodged in the œsophagus. With great difficulty she swallowed large doses of castor-oil for the first two or three days, for the purpose of acting as an emetic in her endeavour to induce its expulsion before seeking aid; but all were of no avail. On the third day, there was considerable abatement of the symptoms, but only to be followed the next morning by sudden spasm of the glottis, alternating with what appeared to me to be inordinate contraction of the muscular fibres, from the hissing noises produced in the throat. All this, however, resolved itself a short time afterwards by the use of hot baths and antispasmodic medicines, though some time elapsed before a succession of different sized bougies even could be passed.

As the patient was very weak, the fauces were first irritated by a feather, thinking this might be sufficient to induce violent expulsive efforts, and carry out the foreign body; but this had no effect whatever, but to increase the patient's agony. A stimulant emetic of mustard and water was next administered with some effort, as she was still unable to perform the act of deglutition, the attempt causing her great pain; and it was only by throwing the head well back and allowing it to be poured in gradually, that we succeeded at all, but only to meet with a similar result. The pharyngeal forceps were then introduced, finding their way a little lower down than the commencement of the œsophagus. Seizing the bone, I made sundry efforts to dislodge it by varied traction power, but was obliged to desist, becoming alarmed by a pretty profuse discharge of hæmorrhage from the mouth. Two courses only were left to me now, either to trust to removal by the ulcerative process, which would soon have (if it had not already, from the foregoing symptom) been excited by pressure on the tissues concerned, or to perform œsophagotomy. While debating with myself as to which of these should be adopted, I devised a contrivance for the purpose, which, I am happy to say, proved effective. A few lead pellets were procured, and I had them firmly secured at the distal end by the ordinary suture wire. As the patient was unable to swallow, the pellets enabled each wire to find its way down the canal, the meshes of the whole becoming entangled with the bone, probably in different parts; and, by pulling two or three of the wires at the proximal end, varying them now and again, the bone was released from its position, much to the delight of the patient, and not less so to my own satisfaction. There can be little doubt, I think, that during the four days of delay, from the pressure and irri-