are smooth, clean, in good condition, and well lubricated, and if of metal, warmed.

2. Always use soft elastic bougies, if possible, and see that the *bougie olivaire* has a pliant neck.

3. More benefit is derived from a bougie which passes easily through a stricture than from a larger one, which is tightly held, and requires force to send it through.

4. It is well, before passing a bougie, to give it a curve, the concavity of which, on introducing it, should look towards the pubes.

5. When using a pilot bougie, always see that the screw is firmly fixed. After the bougie has been used several times, it is apt to become rotten at its junction with the screw. Should this be the case, on withdrawing the instrument through the stricture, the pilot might be left behind in the bladder, necessitating further prolonged operative measures for its removal. I once met with an accident of this kind, the pilot remaining behind in the bladder. I saw the patient two days afterwards, and, after performing internal urethrotomy for a stricture, was able to extract the bougie by means of a lithotrite. —[*Vide* BRITISH MEDICAL JOURNAL, 1882.]

TWO CASES OF BRONCHOPNEUMONIA TREATED WITH BLEEDING AND ICE.

By DAVID B. LEES, M.D., F.R.C.P.,

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CASE I.—Emily B., a domestic servant, aged 15, but looking older, came among my out-patients at St. Mary's Hospital on January 24th last, complaining of cough, shortness of breath, and sharp cutting pain in the left side. She had been ill for about ten days, and thought that she had taken cold from sleeping in a damp bed, having on several occasions awoke during the night to find herself shivering. I found that there was a patch of dullness in the second left interspace in front, and *râles* over the greater part of the left lung, and also at the base of the right. There was much dyspnoea, and the temperature was over 104°. By the kindness of Dr. Cheadle, I was enabled to admit her into the hospital under my own care. She was at once put to bed, and hot poultices applied to the chest.

January 25th. She had slept fairly during the night, but this morning had much distress in breathing. The dyspnoea was very obvious. There was restlessness; the lips were livid, and the cheeks dusky. Temperature 105°; pulse 136, regular, and fairly strong; respirations 44. The urine was of specific gravity 1030; it contained urates, but no albumen; chlorides were present. The bowels had not been opened during the last four days. The sputum was copious, viscid, not rusty. There was dullness over the whole of the front of the left side of the chest to the nipple-level; the breathing, however, being simply harsh, and not tubular. Resonance was somewhat impaired below the angle of the scapula on both sides; and at both bases, in front and behind, was an abundance of moist *râles*, heard during expiration as well as during inspiration. These physical signs, combined with the high temperature, seemed to denote a severe bronchitis extending to the smaller tubes, with commencing consolidation of the left upper lobe. Taken with the symptoms of great dyspnoea and lividity, they seemed to render it necessary at once to give relief to the overstrained right heart, without waiting for the slower action of purgatives and emetics. Venesection was, therefore, performed at 11 A.M., ten ounces of very dark blood being drawn off. The relief to the dyspnoea was immediate, manifesting itself even while the blood was flowing; and the lips lost their blueness. An enema was administered, after which the bowels were opened twice. —At 12.30 P.M., the temperature had fallen to 103.6°, the pulse remaining at 136, and the respirations still in number 44, but much quieter. The patient felt much more comfortable. —At 9 P.M., the temperature was again 105°; but the lips were red, and the dyspnoea had not returned. An emetic was ordered, to clear the bronchial tubes of the very copious secretion, and a mixture, containing ten drops of antimonial wine and ten grains of bicarbonate of soda, with half an ounce of liquor ammoniæ acetatis, to be taken every four hours.

January 26th. She was relieved by the emetic, and had slept fairly well. The cough was less troublesome; the lips were rather more blue again, and the cheeks somewhat dusky. Temperature 105.6°; pulse 144; respirations 48. The right side of the chest was forcibly expanded during inspiration, especially in its upper part. The left front was dull from the clavicle to the nipple-level, with bronchial breathing under the clavicle. There was dullness also about the posterior

edge of the left scapula. At both bases, *râles* were heard as before. The heart was normal.

It was obvious that, though the immediate urgency had been met, the pulmonary symptoms were advancing in gravity. It was therefore determined to give up the poultices, which had been used for two days, and to try the effect of cold applications. Directions were given that the patient should be sponged, first with tepid and then with cold water. This change proving pleasant to her, an ice-bag was applied to the left chest at 3 P.M. Immediate benefit seemed to follow. At 8 P.M. she looked tranquil and easy; the lips were redder; the temperature had fallen a degree and a half (to 104°); and the frequency of the pulse had lessened by 28 beats per minute, being now only 116. The respirations were still 46 per minute, but without marked dyspnoea. The physical signs also had improved, there being now fair resonance from the clavicle to the second rib. From the second rib to the mamma there was still dullness, with bronchial breathing, and coarse *râle* during inspiration only. At the right anterior base there was still moist *râle* to be heard, during both inspiration and expiration. Pain in the left side continued.

January 27th. The ice-bag had been kept on all the night. Slight delirium was observed early this morning. The temperature had fallen continuously, and at 5 o'clock this morning was only 98°. After 8 A.M., however, it rose again, and at 4 P.M. stood at 105.8°, the highest temperature throughout the illness. Pulse 126; respiration 40. I found that the left apex was still improving, the resonance having now reached as low as the third rib; and over this area the breathing was fairly normal, only the expiration a little prolonged. There was still dullness from the third rib downwards, but the breathing over it was less harsh, and there were expiratory as well as inspiratory *râles*. There were still moist sounds at the right base as before. So far there was improvement, but the rise of temperature was accounted for by the discovery of fine inspiratory crepitation at the angle of the left scapula, and bronchial breathing in the axilla. Obviously a fresh portion of lung had been attacked. The ice-bag was continued, and senega substituted for the antimonial wine.

January 28th. The temperature had again fallen to 98°, and the pulse to 82. The respirations still numbered 44. The dullness was now limited to a small area at the anterior border of the left axilla, over which loud moist *râles* were heard, with hardly any bronchial breathing. There was diarrhoea yesterday, the bowels being opened twelve times, and she was sick after the medicine, which was therefore changed to quinine. At 2 P.M. the temperature began to rise again, but the high st point which it attained was 103°.

January 29th. Temperature 98°; pulse 108; respiration 36. She was taking food well. In the afternoon there was another (and final) rise of temperature to 104.2°. I found that the signs on the left side were still improving, but there was now dullness in the first interspace on the right side, which had hitherto been quite normal, and harsh inspiration as low as the second rib. It seemed as if the right lung were about to follow the example of the left. Another ice-bag was at once applied to the right apex. To my surprise, I found next day (January 30th) the right apex perfectly normal; with good resonance and natural breathing. Pulse 84; respiration 42; temperature 96.7°.

On the 31st the temperature was 98.4°, at or about which it remained; the pulse 84; respirations 36. There remained only some slight impairment of resonance over the left lung posteriorly, and the catarrhal sounds had quite disappeared.

From this time convalescence was uninterrupted, and when I examined her chest, before her departure for a convalescent home, I found everything perfectly normal.

CASE II.—On February 3rd, I was asked to see, in consultation with Mr. Langston, of Westminster, a female infant aged 6½ months. She had been seriously ill for two days, and had had a slight cough for several days previously. She was believed to have taken cold from exposure to cold winds. The temperature was 103.4°. There was some active distension of the abdomen, with cough, which was evidently painful. On examining the chest, we found that there was only very slight impairment of resonance over the right back, with dryish *râles* over the upper lobes behind, and a good deal of moist *râles* over the bases, both before and behind. We directed that a large turpentine-stupe should be applied to the chest, to be followed by the use of linimentum terebinthinæ, and that a bronchitis-kettle should be kept constantly on the fire, the temperature of the room being maintained at 65° Fahr. By the mouth, she had been taking milligramme-granules of aconitine and of scillitine; these were now exchanged for similar granules of emetine.

February 4th. Temperature 103.5° (last night, 104°). There was now decided dullness over the root of the right lung, with bronchial

breathing and sharp *râles*. Loud normal breathing was heard over the left lung, with some moist *râles* at the left base. She was ordered to continue the emetine, and to have large mustard and linseed poultices.

February 5th, 7 P.M. Temperature this morning 103.5°, now 104°. The child had been very restless to-day, and cyanosed. During the afternoon, it was said to have been "quite black" around the mouth. Even by artificial light, it was easy to see that the face was dusky. The respirations were exceedingly hurried. On careful counting, there were found to be 28 inspirations in 15 seconds, or 112 in the minute. The heart's action was comparatively slow, very little more than 100 per minute. Over the right ventricle, the second sound was loudly accentuated; and even amidst the noisy inspirations, of about the same frequency as the cardiac action, the thud of the pulmonary valves could be clearly heard. It was evident that the strain on the right ventricle was rapidly becoming more than it could bear, and that, unless immediate relief were afforded, many hours would not elapse before arrest of its action would result. Three leeches were immediately sent for. Meanwhile, the child was placed in a tepid bath rapidly cooled. It remained in the bath for five minutes, but the effect was to raise the rectal temperature from 104° to 105°. Probably, a reduction of temperature would have followed a longer immersion; but, the leeches having arrived, they were immediately applied over the sternum. They took well, and the bleeding was afterwards encouraged by a poultice. It was estimated that the amount of blood drawn off was about an ounce, which may be considered equivalent to a moderate venesection in the adult. It was very interesting to watch the immediate relief which followed. Even while the leeches sucked, the breathing became much slower and deeper; indeed, the frequency of respiration sank to the rate of 50 per minute, less than one-half of its former amount. The pulse, on the other hand, became more rapid, and was noted to be fully 120. An hour later, the respirations numbered between 60 and 70, and the pulmonary second sound was found to be much less accentuated. The emetine was discontinued, and it was determined to lay aside the poultices, and try the effect of external cold. An ice-bag was therefore laid over the upper posterior right chest, and directions were given that milk or broth should be administered (without stimulants), and the temperature taken every hour.

February 6th. The child had slept fairly, and the cough was less troublesome. She had taken nourishment well, sucking the bottle strongly, which on the previous day she quite refused. The temperature had been over 104° all night, and for three hours was 105°. The lips and cheeks were still decidedly dusky, but nothing like so much so as the day before. The father said he "would hardly have noticed it to-day." The heart seemed now to have quite recovered itself; there was no accentuation of the pulmonary second, and the action was much more frequent, nearly 200 in the minute. The respirations were about 80. There was less dullness over the inner margin of the scapula, but perhaps a little extension of dullness outwardly, and over this spot were some sharp *râles*. During the day the temperature fell till it reached 101.7°, when the ice-bag was removed according to instructions. Next day (February 7th) it was noted that there was distinctly less dullness over the scapula, but that at its outer edge the *râles* persisted. The left lung was now absolutely normal. In the evening, the thermometer again marked 103°, and the ice-bag was reapplied, but was soon removed, as the child was thought to be restless under it. The temperature, however, had fallen to 102.6° in the morning of the 8th, and to 102° in the evening.

February 9th. The temperature was now only 100.3°. The colour was much improved, no longer dusky. The cough was looser. The child lay quietly.

February 10th. A sudden accession of pyrexia had occurred, the thermometer standing at 105.6°. There were no new signs in the right lung, but a patch of dullness with harsh breathing was now found over the root of the left lung, which for the last two days had been normal. There were also sharpish *râles* at the angle of the left scapula. Respirations, 70; pulse, 170. The *alæ nasi* were again working freely. There was no stress on the pulmonary second sound. The ice-bag was reapplied, and an immediate fall of temperature followed. At 8.45 A.M., when the ice was again applied, it stood at 105.4°; at 10.30 A.M., 102.6° (a fall of nearly three degrees in less than two hours); at 12.30 P.M., 101.6°; at 2.30, 100°; at 4.30 P.M., 98.8°; at 9.30 P.M., 101°. It was directed that the ice should be used whenever the thermometer marked 102°.

February 12th. Morning temperature, 103.4°. There was now fresh dullness over the left apex posteriorly, with harsh breathing. Evening temperature, 101°.

February 13th. At 3.30 A.M., the thermometer suddenly rose to

106°. The ice-bag was reapplied, and a rapid reduction followed. At 9 A.M., it was only 102.4°; respirations, 170; pulse, 60. The child seemed fairly comfortable, and inclined to play with a watch held in front of it. The dull spot at the left apex had now quite cleared up, but there was a finger-tip area of dullness behind the edge of the left scapula. The *râles* had nearly disappeared.

February 14th. The physical signs in the lungs had now quite disappeared, but the temperature continued to be high (morning 101.5°; evening 104°). This proved to be due to the co-existence of internal otitis resulting in posterior basic meningitis. At all events, most of the symptoms of that disease were present. Under vigorous treatment, including paracentesis of the tympanic membranes, these symptoms entirely passed away; and, after an illness of seven weeks, the child recovered perfectly, and has since remained well.

I reserve for a subsequent communication the details of the later part of the case, which are of great interest, my object at present being simply to discuss the treatment of the pneumonia. But to prevent any misapprehension, it will be well to add that the first symptoms of the otitis were present before the ice-bag was first used. The aural inflammation was a part of the original catarrh; and I have seen several cases in which a similar otitis of catarrhal origin (sometimes with, sometimes without, accompanying bronchitis or pneumonia) has caused death by producing posterior basic meningitis. But for further details on this subject, I must refer to a forthcoming paper by my colleague Dr. Barlow and myself.

REMARKS.—The true indication for bleeding in pneumonia seems to be the approach of failure of the right heart to overcome the greatly increased pressure in the pulmonary artery, due either to extensive consolidation of lung, or to overwhelming engorgement. Evidence of this approaching failure was present in each of the cases above narrated. In the former, the necessity for bleeding was in my opinion urgent; in the latter, it was not urgent but imperative. In both, the relief afforded was marked and immediate. It is doubtful, however, whether it would in either case have been more than temporary but for the beneficial influence of the cold applications. The superiority of the ice-bag to the poultices which it replaced was very obvious in each case. The older patient was conscious of increase of comfort during its use, and the application was therefore continuous, both by day and by night. In the case of the baby, the ice was removed when the temperature sank to 102°, and replaced when a further rise occurred.

ON GONORRHEAL RHEUMATISM IN INFANTS, THE RESULT OF PURULENT OPHTHALMIA.

Read before the South London District of the Metropolitan Counties Branch.

By R. CLEMENT LUCAS, B.S.Lond., F.R.C.S.,
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IN the BRITISH MEDICAL JOURNAL, of February 28th, 1885, I published a short note of a case in which two joints of an infant were inflamed, in association with purulent ophthalmia. This case was thus put forth in an incomplete form, because I believe that the relation of purulent ophthalmia and joint-disease as cause and effect is an entirely new observation, and I wished at once to court the criticism of the profession upon the case.

My desires in this respect have not been disappointed. Among my colleagues the case was received with becoming scepticism, but its course and termination left no alternative explanation, save an accidental acute inflammation, without injury, of two distinct joints; and the friendly doubts of my colleagues in almost every case ended in their being convinced of the correctness of my views. Nor were my critics confined to my own colleagues. My friend, Dr. Thomas Barlow, for whose views I always entertain the highest respect, wrote by the next post, begging me to be very careful to exclude the possibility of syphilitic epiphysitis, the importance of which I admit, and upon which I am able, I think, to satisfy the most rigorous of critics. The course and termination of this case will now be given in detail; and, by the kindness of a colleague, I am able to supplement it by another which, taken alone, is deficient in materials from which to draw any exact conclusions, but which, read in connection with my own, will probably be admitted to belong to the same category. The following is a detailed account of my case.

M. B., aged 34, first brought her infant son, aged eighteen days, to see me, on February 12th, 1885. She had been twice married. By her first marriage she had given birth to five children, all of whom