and small beasts of thirty-four different varieties, according to a careful report of Dr. Alfred Hill, published some few years ago.

The only point remaining, and worthy of further allusion, is that all the conclusions formulated by Sir Spencer Wells in 1878, based on his own experience, have, without exception, been reversed by the statistics freed from his heavy mortality. One of his conclusions was a very serious one, for it hampered progress very much, especially in operations for removal of the uterine appendages. It was to the effect that removal of two ovaries was a far more fatal operation than removal of one.

This conclusion ought to have been, that two pedicles in a clamp were far more risky than one; now it is evident that it is in no way more risky to remove two ovaries for cystoma, or anything else, than to remove one. In connection with this point, it may be as well to say that, in the period embracing this series of 139 successful cases, there has not been in my practice a single incomplete operation.

Now that we have cleared away all our superstitions, and view the facts in a more reasonable light, we see this operation of ovariectomy not only the most successful achievement in surgery, but we have to regard it as a portal, which, opened within the last eight years, has led to innumerable other blessings to suffering humanity.

CONTAGIOUS PNEUMONIA.

By WILLIAM BRUCE, M.A., M.D., Dingwall.

THE following paper was read at a meeting of the Inverness and Ross Sub-branch of the Northern Counties Branch of the British Medical Association, and is now published as a continuation of a former contribution, on Contagious Pneumonia, which appeared in the JOURNAL on August 11th, 1883.

It may be taken as quite settled that epidemics of pneumonia, of an infective character, do occur at rare intervals; the evidence being complete, not only on the side of the patients' histories occurring in groups, with definite connections locally, but also from the proof of active organisms, with well defined characters, having been found, when properly searched for and examined. I am sorry I did not possess the necessary knowledge, or physical means, of drawing and describing those organisms in the set of cases I have seen; but the fact will be noted that organisms were seen, at one stage numerous and active, and at a later stage either inactive, or not to be found at all.

There have been occasional cases of pneumonia observed since, in this district; but they have been very few (fifteen in 1884) in my practice, and do not exceed the usual number in similar localities. With regard to the natural history of contagious pneumonia, I would draw attention to the almost constant presence of pleurisy as a concomitant of pneumonia; indeed, it was often the first and most striking symptom. I think I have seen a run of pleurisy cases before, and may have missed the pneumonia. The interesting point is that, in cattle, a similar disease is called pleuro-pneumonia.

As to treatment, it will be noticed that one case was bled from the arm. This I have often previously done in pneumonia, and, twenty-five years ago, it was my common practice. My friend, Professor Dyce Davidson, of the University of Aberdeen, saw the case referred to, and urged me to bleed. He and others considered that the bleeding saved the patient's life. Certainly the girl was, that day, in the gravest danger, with respirations over 80 per minute and a running pulse. But I think the tide was turned before she was bled. Certainly the bleeding did no harm, and gave relief, as it usually does. On the whole, my experience is that venesection has no real influence on pneumonia—nor, let me add, on one or two other diseases in which, I may say, I have invariably bled patients freely from the arm, namely, puerperal and albuminuric convulsions. I am not, however, disposed to abandon the lancet, any more than many other doubtful remedies of the *Pharmacopœia*. I would draw the line, however, at the hither side of calomel and large doses of antimony, as I equally disapprove of brandy and beef-tea, given as a matter of routine. Poulitices, continued for a reasonable time, say, two or three days, followed by firm strapping, mild expectorants, regulated nourishment, and good nursing, with plenty of fresh warm but not hot air, are, to my mind, the essentials of treatment in contagious pneumonia. The healthy and strong recover; the very old, and especially the dissipated, die off quickly. And this will continue to be the result in such patients, in spite of all treatment. I hope my neighbour, Dr. Adam, will contribute his cases and experience; and then, with Dr. Sutherland's (see JOURNAL, August 11th, 1883, and *Collective Investigation Record*, vol. ii), we shall have a pretty complete picture of the disease I have

endeavoured to describe, as witnessed in Wester Ross in 1882-83. I should like to know if any of our members have any reason to believe in the occasional epidemic character of acute rheumatism. I think I could bring forward a series of cases, tending to show that acute rheumatism does, now and again, become epidemic.

GROUP V. CASE XVII.—Mrs. R. was first seen on August 26th, 1883. The day before she had felt chilly, and, in the evening had a rigor; pulse 102, temperature 101°. August 27th. Pulse 102, temperature 101.5°. She had a flushed face, pain in the right side, and cough. August 28th. She had pain in the side and cough, with rusty sputum; pulse 112, temperature 102.4°, respirations 40. August 30th. She had a troublesome cough, with tenacious rusty sputum, great thirst, and foul tongue; pulse 112, temperature 102.5°, respirations 39. August 31st. There were dulness at both bases, bronchial breathing, and rusty sputum; pulse 128, temperature 101°, respirations 40. September 1st. Pulse 92, temperature 101.6°, respirations 52. The other symptoms continued. The sputum was examined microscopically, and found to contain numerous micro-organisms, 1-10,000th to 1-14,000th part of an inch in diameter, some round, some dumb-bell-shaped. September 3rd. Her condition was little altered. September 4th. Pulse 88, temperature 101.6°, respirations 60. There were dulness and bronchial breathing, with sonorous rales, all over the left and upper lobe of the right lung. Air was entering the lower lobe of the right lung fairly well. September 5th. Pulse 100, respirations 52. Both sides behind were full of moist rales. The sputum was tenacious, but not bloody. September 7th. Pulse 100 (emptying), respirations 52. The right lung was pretty clear. September 10th. Pulse 94, temperature 101, respirations 57 to 60. There was cough. The pulse was fairly strong, and had not the suddenly emptying character of the few former visits. The patient could lie down in bed on the left side with comparative comfort. The sputum was muco-purulent, tenacious, and in great quantity. The right lung was clearing up well; the breath-sounds were rough; there were no adventitious sounds. In the left lung were rales and bronchial breathing. September 13th. She was a good deal improved; pulse 90, respirations 30. The cough was much less troublesome, and the lungs were clearing up well. This case progressed favourably, and the patient is now quite well.

CASE XVIII.—Mary H., aged 16, residing at Novar, Ross-shire, was admitted to the Ross Memorial Hospital, Dingwall, on September 1st, 1883, suffering from acute pneumonia. Two years ago, the patient had typhoid fever, and was then treated in this hospital for three weeks, at the end of which time she was discharged convalescent. Since that time, her health had continued good until two days before admission, when the patient was seized with her present illness. The patient had acted in the capacity of domestic servant to Case XVII, who, on August 25th, was laid up by a very sharp attack of pneumonia. The patient continued to attend to her mistress until August 29th, when she herself became the subject of the same disease. On that day (29th), the patient had a rigor, and severe pain in the left side. She became very feverish and weak, and took to her bed. On the 30th, she was visited, when the following state of matters was found. She had pain in the left side. There was dulness up to within one inch of the inferior angle of the scapula behind, and to within one inch of the nipple in front. There were fine crepitation, cough, and rusty sputum. On August 31st, a small quantity of sputum, which had been collected in a stoppered bottle which had previously been thoroughly cleaned, was examined under the microscope. Great numbers of minute organisms were discovered, moving about in the most lively fashion. September 1st. The patient was removed to hospital. The temperature stood at 101°, pulse 105, respirations 42. She had flushed face and pain in the side. Dulness of the left side was well marked up to the angle of the scapula, two inches below which fine crepitation could be heard; and, in the axillary line, a distinct pleuritic friction-sound. On the morning of September 2nd, temperature 102.8°, pulse 125, respirations 46. She was flushed, had pain in the side, friction-sound, crepitation, and dulness; and, on the whole, there was little change from the previous day. The evening temperature was 108°, pulse 130, respirations 50. To-day, the patient was made to expectorate upon a slide, which was immediately placed under the microscope, when numerous micro-organisms were found to be present in the sputum. It may be mentioned that, after this date, though the organisms were still present, they were never found to move about as they did in the earlier stages of the attack. September 3rd. The nurse reported that the patient had had a very restless night. On examination of the chest, it was found that the left lung presented no change from the records of the previous day, but that the right lung had also become affected, being

¹ The groups and cases are numbered in continuation of those in the former paper.

dull up to the level of the nipple in front, and to the lower angle of the scapula behind, with fine crepitation. There was lividity of the face and lips. Temperature 102.8°, pulse 132, respirations 80. In the afternoon, there was little change, and the very hurried respirations were almost entirely bronchial. Blood to the extent of eight or ten quinces was taken from the arm. This was followed by marked improvement in the pulse; the respirations fell to 52; and the patient felt much easier, and slept a little. The temperature remained at 102.8°. September 4th. The patient had rested well during the night. Temperature 98.4°, pulse 96, respirations 40. The physical signs remained the same as those of the previous day. In the evening, the pulse was 88, temperature 98.4°, respirations 32. There were dulness and bronchial breathing, with a few loud *râles* and friction-sound on the left side; small crepitation, with bronchial breathing, on the right. The sputum continued rusty and tenacious. September 6th. Morning: pulse 92, temperature 98.4°, respirations 40. Dulness was not diminished. Crepitation *redux* was heard. Evening: pulse 88, temperature 98.4°, respirations 28. September 7th. Pulse 80, respirations 32, temperature 98.4°. Evening: pulse 76, temperature 98.4°, respirations 32. September 8th. Pulse 72, respirations 28, temperature 98.4°. Evening: pulse 70, temperature 98.4°, respirations 24. September 9th. Pulse 72, temperature 98.4°, respirations 24. There was dulness to within one inch of the spine of the scapula on the left side behind, and to the nipple-line in front. Crepitation *redux* was heard. The pleuritic friction-sound was disappearing. Air was entering the lung fairly well. On the right side, dulness was more marked than on the left. Breathing was bronchial. There was increased vocal fremitus. The patient continued to do very well, and a week later was dismissed.

CASE XIX.—G. McL., on Wednesday, which was a wet, stormy day, was engaged in out-door labour. The same evening he felt unwell; the next morning he felt worse, but did not consider himself sufficiently ill to stay away from his work. Accordingly he went at the usual hour, but had to return home, feeling very cold, and complaining of cough, and pain in the side. That night he had a rigor. On the following Sunday he was seen, when he was found to have a pulse of 104, temperature 103.2°, respirations 30. There were dulness at the base of the left lung, fine crepitation, and rusty sputum. This, like the two preceding, was a typical case of pneumonia. On the ninth day, the crisis took place. The patient rapidly improved, and is now quite well.

CASE XX.—J. S. was exposed to the weather on same day as the last case. On that (Wednesday) evening, according to his own account, he became very ill, and took to his bed. On Sunday he was seen, and found to have marked symptoms of a double pneumonia; pulse 104, temperature 103.4°, respirations 56. There was rusty sputum, with fine crepitant *râles*, and dulness at both bases, and severe pain in the back. The heart-sounds were irregular, intermittent, and weak. The patient's aspect was very dejected, and, altogether, his symptoms were such as to hold out little hope of recovery. In two days he died.

All the cases of this group occurred within a radius of a quarter of a mile.

GROUP VI. CASE XXI.—McI. (child) was first visited on August 6th. There were loss of appetite, pain in the side, and flush. Pulse 150, temperature 103°, respirations 52. There was dulness at the left base, fine crepitation, and cough. August 10th. The sputum was rusty. There was fine crepitation at the spine of the scapula, flush, and dyspnoea. August 12th. There was copious perspiration, with deferrescence. The cough was slightly abated. The pain in the side continued. Rapid recovery followed.

CASE XXII.—J. McD., aged 8, was first visited August 10th. The patient had been ill for some days; pulse frequent, temperature 100°. There were signs of consolidation at the left base. August 12th. Pulse 105, temperature 100.6°, respirations 28. There were dulness over the left base, increased vocal fremitus, and resonance. August 16th. Pulse 120, temperature 102°, respirations 32. There were dulness, pain in the side, and cough with tenacious sputum. August 18th. Pulse 90, temperature 101°, respirations 28. The patient had cough, with tenacious sputum; he sweated a good deal, and was flushed. August 22nd. Pulse 100, temperature 98.4°, respirations 26; crepitation *redux* was heard. There was dulness at the right base. August 26th. Pulse 100, temperature 99°, respirations 25; cough was still present, but the patient was much improved.

CASE XXIII.—F., aged 50, was visited on August 16th. For a few days previous he had felt unwell, with an occasional shivering fit. Thinking that he was suffering from an ordinary cold, he took a dose of calomel. This did not relieve him, and, on the appearance of blood in his sputum, he sent for a medical man. At the time of visit, there

were cough with bloody expectoration, dulness, and fine crepitant *râles* at the left apex; pulse 65, intermittent. August 18th. There were dulness and fine crepitation at the apex of the left lung. The blood in the sputum was diminished; pulse 75. August 20th. Pulse 100, respiration 32; crepitation was heard at the left apex. There was a suspicion of commencing right pneumonia. Some of the sputum in this and the previous case was collected in a stoppered bottle and examined, when micro-organisms, similar to those already spoken of, were found. August 24th. The dulness and crepitation at the left apex continued. The rest of the pulmonary apparatus was clear. Blood had ceased to appear in the sputum; pulse 80, temperature 98.4°, respirations 28. The microscope was brought to the patient's house, and the sputum was examined; micro-organisms were found. A few days later the sputum was again examined (fresh supply), but no organisms could be found. This patient was weakly, and took a long time to recover.

A CASE OF PNEUMONIA, OCCURRING AT A COLD HIGH ALTITUDE.

By A. TUCKER WISE, M.D.

C. J., aged 30, an Italian, native of a malarious district in Italy, was seized with giddiness, sickness, and shiverings, on January 20th, at 8 P.M. He was in bed, complaining of pain over the left lumbar region. He looked pale and sleepy. Pulse 100, strong, large, and of moderate tension; temperature 101°, respirations 28, conjunctivæ blanché. He vomited during the examination of his chest. There was no delirium nor rigors. The chest presented signs of harsh entry of air over both sides of his back; general impaired resonance, but no absolute dulness. With the slight cough he had, there was rusty, gluey expectoration. His urine was normal. The bowels were open; tongue moist, not coated. He was given a hypodermic injection of morphine, and ordered liquid diet.

January 21st. He complained of pain in the left side; temperature 101°, respirations 28, pulse 100. His lips were bright-red, and his face flushed a little. There was dulness over the left infrascapular region, limited to an area of four square inches; fine crepitations were heard there, with bronchophony and tubular breathing. He was ordered a mustard-leaf over this spot, and half a drachm of compound spirit of ammonia, in water, every four hours; also 5 grains pills hydrargyri with coloc., at night.

January 22nd. The bowels were open freely; his face was flushed; spleen enlarged. On inquiry, it was found that he had suffered, a few years ago, from malarial fever; pulse 116, temperature, 104.1°; respirations 30. He had great thirst; his tongue was white and moist. He was ordered a grain of opium, and turpentine stupes.

January 23rd. Respirations 30, pulse 100, temperature 104°; dulness and tubular breathing extended to the right side, and over the whole of the left lung. He slept well during the previous night. He was ordered to have 5 grains of quinine.

January 24th. Respirations 32, temperature 101.7°, pulse 100, regular, but weak. He was ordered to have half a drachm of compound spirit of ammonia, and half a grain of powdered opium, every four hours, in water.

January 25th. Respirations 33, temperature 103.2°, pulse 106 (dicrotus). The urine was loaded with lithates. Owing to the low temperature of the room, his medicine was frozen in the bottle. He was ordered to have 5 grains of quinine.

January 26th. Temperature 100.6°, respirations 24, pulse 104. *Redux* crepitations were heard over the whole of the right back. His tongue was moist, and coated with white fur. He had slept well, and coughed less. The sputum was still rusty coloured. All liquids in the room were frozen, and the vapour of his breath was plainly perceived from the other end of the apartment. The bottle of milk, and also the medicine-bottle, he placed under his pillow, to guard against their solidification. He had not felt the cold. His aspect was improved. The temperature in the open air this day was 2° Fahr. at 9 A.M., 16° Fahr. at noon.

January 27th. Temperature 98.2°, respirations 22, pulse 80. There was amelioration of all bad symptoms. The temperature of the room stood at 25° Fahr. at the time of my visit.

January 28th. Temperature 97.8°, respirations 28, pulse 64. The temperature of the bedroom was 21° Fahr.

January 29th. He was progressing favourably. The temperature of the bedroom was 23° Fahr.