cular cartilages of the hip-joint. But I will not undertake to decide the point. Enough has been said to bring the main features of the disease under your notice; and when we next meet I purpose to direct your attention to the important questions of diagnosis and treatment.

CASES OF ACUTE TUBERCULOSIS.

By J. W. F. SMITH SHAND, M.D.,

PHYSICIAN TO THE ABERDEEN ROYAL INFIRMARY AND LECTURER ON CLINICAL MEDICINE.

THE following cases are examples of acute miliary tuberculosis occurring in persons who had previously enjoyed good health, and who succumbed to the disease in the course of a few weeks. The supervention of acute tuberculosis in cases of chronic wasting disease is not uncommon, and the probability of its occurrence may be anticipated; but the other variety is more rare, and the difficulties experienced in the diagnosis are often very great. In itself a constitutional disorder, it often commences with the symptoms of a common cold; subsequently it may assume the characters of a specific fever—an enteric fever; and then, even with the aid that the thermometer affords, the practitioner finds himself oppressed with doubts as to the real nature of the case.

The duration of the disease and the symptoms in tuberculosis and enteric fever are so much alike that it is probable the one is not unfrequently mistaken for the other, and that the rarer disease is set down as an example of typhoid fever presenting, it may be, supposed anomalous symptoms. In other cases it is apt to be mistaken for capillary bronchitis, or even meningitis.

CASE 1.—W. G—, aged seventeen, a farm servant, was admitted into the Aberdeen Infirmary on April 13th, 1864, complaining of cough and weakness; no expectoration. His face was of a dusky hue, and there was great expansion of the nostrils during inspiration. There was also considerable aphonia, but he made no complaint of pain in the larynx, or in any other part of his body except the small of his back. On inspection the body was slight and spare, and the chest well formed. The respiratory movements of the thorax were much exaggerated and quickened, and, on applying the hands, rhonchial fremitus was extremely well marked. Percussion elicited a clear sound over both lungs. Auscultation gave fine dry sibilant rhonchi equally over all the chest, but they were not very intense. Heart sounds normal. Pulse 120. Tongue moist, with a light-brown fur. Bowels regular. Urine 1025; gave no precipitate with heat or nitric acid. Burning heat of skin.

He stated that his present illness came on with a cough a fortnight before admission, and he attributed it to overwork and exposure to cold and wet.

April 14th.—Ordered beef-tea, and a mixture containing small doses of antimony.—15th: Cough less frequent; no expectoration. Had been delirious last night.—18th: Crepitation is heard, along with sibilus, in both mammary regions. Stop mixture.—19th: Crepitation audible over both backs. Cough has almost ceased, and there is still no expectoration. Nocturnal delirium continues. Pulse 120, weak. He is unable to stand when taken up to stool, and has occasional rigors followed by profuse perspirations. To have port wine and an extra allowance of beef-tea.—20th: Cough has entirely ceased. Left side of chest expands more than right. Breathing still forced; is now more abdominal. Dulness on percussion in right infra-axillary region. Crepitation and sibilus over other parts of chest. Great thirst. Tongue dry, with thick brown fur; dental sordes. Bowels regular. No abdominal tenderness on pressure, and no rash on skin.—21st: Confused and delirious to-day. Brandy to be added to the wine.—22nd: Diurnal wandering and nocturnal delirium continue.—23rd: Bathed in profuse perspiration; pulse 130, fluttering; is evidently sinking. Died at 4 P.M.

Autopsy, nineteen hours after death.—(Reported by Dr. Beveridge, Pathologist.)—Between one and two pints of sero-sanguinolent fluid was found in the right pleural cavity. The right lung weighed 34 oz., and the left 29 oz.; both

were in a state of venous engorgement, and equally and thickly studded with grey tuberculous granulations. The tubercles in the apex of each lung were about the size of split peas, and were larger, softer, and more isolated than those in the base, where they were of the size of pins' heads. The pericardium contained about half an ounce of fluid. The heart was small and flabby. The liver was very soft, and had small yellow tubercles sparsely scattered through its substance. The kidneys, small and softer than natural, were thickly studded with grey tubercles. Intestines very pale; mucous membrane not examined. Spleen healthy. Brain not examined.

Remarks.—The duration of the disease in this case was less than four weeks. After the examination on April 14th I set down the case as one of capillary bronchitis; but for the next four days I could not reconcile in my own mind the intensity of the febrile symptoms and the dyspnoea with the comparatively slight amount of bronchial râles, the diminution of the cough, and the absence of expectoration; and when I found, on the 19th, that the nocturnal delirium was increasing, prostration rapidly advancing, and sordes forming on the teeth, I was disposed to look upon it as a case of typhoid fever, although there were no rose-coloured spots, abdominal pain, or diarrhoea. There was none of the orthopnoea usually found in capillary bronchitis, and during the whole period of the illness he lay almost entirely on his back with the shoulders moderately raised.

CASE 2.—J. S—, aged twenty-two, a farm servant, was admitted into the Royal Infirmary on Jan. 7th, 1871. About five weeks previous to his admission he got wet, and a few days after he had, as he supposed, a severe cold, which, however, did not disable him from work for nearly two weeks. About the middle of December the cough became very severe, and the expectoration was scanty. His appetite was bad and thirst great.

On admission he complained of weakness, want of breath, and pain in the chest, while his general expression was dull and stupid, and his countenance of a dusky red, almost approaching to lividity. Inspection showed that the chest movements, even on deep inspiration, were very restricted. The percussion note over both sides was equal, and, although not very resonant, still could not be called dull. On auscultation nothing was to be heard beyond soft feeble breathing. The number of respirations was 40 per minute. The sputum was scanty, frothy, and viscid. The urine contained no albumen, and the bowels were regular. The temperature was 102.2° at noon. The next two days he felt easier and better, and he was ordered beef-juice and four ounces of wine. On the 11th he complained of diarrhoea, but it was slight; and sub-crepitant râles were heard over the right lung. On the 14th he was delirious. On the 16th his temperature was 104° at noon. He died on the 17th.

At the autopsy the lungs were found much congested and equally disseminated with miliary tubercle, which in the apex of the left lung was beginning to break down into a few cavities about the size of split peas. The right lung weighed 49 oz. and the left 55 oz.; the liver 60 oz.; the right kidney 5 oz., the left 4½ oz., and they each contained a few tubercles about the size of pins' heads. The spleen weighed 8 oz., and was profusely studded with very minute tubercles about the size of pin-points. The mesenteric glands were healthy, but the solitary glands of the large intestine were enlarged and a few of them ulcerated. The small intestine was congested, but Peyer's patches were healthy.

Remarks.—Although the duration of the disease in this case was longer than in that of W. G—, still it was not more than seven weeks from beginning to end. I was struck at the very outset by the appearance of the man's face, which indicated very plainly that there was an impediment to the passage of blood through the lungs, and to its proper oxygenation. The general febrile condition, delirium, and diarrhoea, gave a certain resemblance to a case of enteric fever; but the history of cough and pain in the chest, the dyspnoea and lividity of face, with the almost negative information afforded by the physical examination, led me to conclude that the case was one of acute tuberculosis. In fact, a livid countenance, dyspnoea, and greatly quickened respirations, with feeble breath-sounds, or comparatively few rhonchi, and a high temperature, together with the absence of dulness on percussion and of bronchial breathing, seem to be the most positive signs of the existence of a primary pulmonary tuberculosis.

It may be as well to state here that I hold with Niemeyer that, "in the present stage of science, there is but one kind of tubercle—miliary tubercle, and but one form of tuberculosis—miliary tuberculosis."

Niemeyer indicates in his lectures on Phthisis that the temperature-curves in that disease are almost as regular as in typhoid fever or acute pneumonia. I cannot, however, find, either in his book or in Wunderlich's (translated by the Sydenham Society), any very distinct guide as to the type of temperature in acute tuberculosis, nor do I see how there can be much uniformity. The extent and type of the tuberculosis seem to modify the temperature very considerably. So much is this the case that Wunderlich states that when tubercles occur in patients suffering from advanced phthisis, pneumonia, or cerebral disease, they sometimes fail to affect the temperature at all, or that at least their influence is very slight. Dr. Woodman, his translator, also expresses his conviction that in some cases miliary tuberculosis does not affect the temperature at all. This opinion is certainly opposed to the statement of Niemeyer, and to the experience of Dr. Sidney Ringer as stated in his book on the Temperature in Phthisis, and to my own so far as my limited observation of the temperature in these cases goes. I can only barely imagine the absence of any rise of temperature as occurring in cases of localised secondary tuberculosis with scanty deposit. The general conclusion of most observers seems to be, that, in primary tuberculosis, the more acute the pyrexia, and the more closely it approaches to the remittent type, the greater is its resemblance to enteric fever; but that in tuberculosis the temperature wave is less regular and less high, and the remissions greater. The absence of rose-coloured spots is not to be depended on in the diagnosis, as they are certainly not always present in enteric fever.

In these two cases the absence of cheesy masses in the lungs and other organs tends to disprove the theory, first advanced by Buhl and since accepted by various writers, that acute tuberculosis is a secondary process, the result of infection produced by the absorption of substances which have undergone caseous metamorphosis.

There can be no doubt, from numerous recent observations, that the miliary tubercles are situated in the connective tissue of the lung, in very intimate relation with the bloodvessels, and not in the alveoli. The alveoli may become blocked; but in uncomplicated cases this effect is produced by pressure and the swelling of their walls, and not by exudation (Rindfleisch). It is long since Virchow, in his "Cellular Pathology," pointed out the lymphoid nature of tubercle, and the very close resemblance of the cells of the tubercle granule with the corpuscles of the lymphatic glands; but it is a question whether the tubercles derive their origin solely from the lymphatic system, as propounded by Klebs, so as to be called the result of a lymphangitis.

Aberdeen.

SUCCESSFUL TREATMENT OF A CASE OF TETANUS.

By J. B. CARRUTHERS, M.D.

THE pathology of tetanus and the most effectual remedy for that disease are yet undetermined questions in medical science. The peculiar character of the disorder and the post-mortem examinations have revealed as yet almost nothing; consequently our treatment of it must be purely empirical. Many drugs of directly opposite action have occasionally been used with apparent success in some instances of this disease. In estimating the effect of remedies, their action should always be noted, and, when beneficial, persevered in and recorded. And as there may be some facts in the following very acute case, which recently occurred in my practice, which may prove interesting to the profession—some novelty in the treatment, and ultimately a good recovery,—I beg to offer a short account of it, as its publication appears to me to be as desirable as, on behalf of science, it may be interesting. Having previously been convinced of the therapeutic value of chloral in combating the involuntary movements of chorea, I in this case

wish to allude to its action combined with bromide of potassium in tetanic spasms, and with astonishingly good effect.

The patient, J. H—, aged fourteen years, a boy at school, of an active and restless disposition, had always enjoyed good health. In the end of the first week of April he got his little-finger bruised and lacerated from a piece of iron falling on it. The finger healed satisfactorily, the nail coming away afterwards. On the 18th April, he and a companion were attempting to scale a high wall; being unsuccessful in their efforts, his companion, with heavy nailed boots, mounted on the shoulders of J. H—, and in consequence of the difficulty of ascending the wall, he trod severely on his shoulders—so much so that he complained more or less of pain there afterwards. Next day he was kicked on the back in an encounter with some other boys, but he was very chary about letting this out, as he rather got the worst of it.

On the 24th April, the first day I saw him, he was very feverish, a pulse of 100, with pain on pressure over both scapular regions, for which I ordered anodyne fomentations. On the following day the symptoms were much the same, he having passed a restless night.

On the morning of the 26th he was seized with tetanic spasms, and rigidity of the muscles of the whole body, with most acute pain over the entire length of the spinal column, so much so that the least pressure with the finger on it was almost unbearable, and in fact brought on opisthotonos. As I now viewed the case as one of considerable medical interest, I asked Dr. T. Keith, of Edinburgh, to see the patient along with me. At our interview the tetanic spasms were most severe, and as the spinal pain had, if anything, increased, we injected twenty minims of nepenthe into his back, and ordered a dozen leeches to be applied over the seat of pain, and ten grains of chloral to be given every three hours in syrup and water. At 9 the same evening Dr. Warburton Begbie saw the patient along with us. The pain over the spine was now greatly relieved, but he was very restless. Pulse 130; temperature 102.2°; his jaw closed; the muscles of his abdomen and legs very rigid; his face livid; his skin warm, and covered with profuse perspiration. We all viewed the case as one of great anxiety, both from its acuteness and suddenness of attack, as well as from the gravity of the disease. The treatment now was restricted to ten grains of chloral hydrate and twenty grains of bromide of potassium in syrup and water every three hours, and to be watched with great care and quietude.

I may here state that Drs. W. Begbie and T. Keith took special interest in the case, freely giving me their valuable opinions on the salient points as they presented themselves during the treatment.

On April 27th at 10 A.M. I saw the patient, and found he had had a very restless night; was scarcely a quarter of an hour quiet during the whole night. Complaints of some pain in his back, and of the burning of his tongue from the chloral; nevertheless the medicine was given during this and the following day every two hours. Pulse 122; temperature in the mouth 102.1°. Swallows milk pretty well when the tube of the cup is pushed into the side of his mouth.

April 28th.—10 A.M.: Had four hours' sleep during the night. The muscles of his legs softer and the tetanic spasms not so violent. As the pain over his spine still continued, a strip of belladonna plaster was applied over its entire length. At the time of my visit, the effort of swallowing his medicine, the taste of which he dreaded, brought on a paroxysm. In the evening of the same day an enema of castor oil and warm water was given, and the action of chloral was now distinctly seen in the congestion of his eyes.

29th.—10.30 A.M.: His bowels acted satisfactorily from the enema; had some hours' quiet sleep during the night, and on the whole his symptoms were alleviated.

30th.—10 A.M.: Slept well during the night. Has still fits of spasms frequently, but they are less easily brought about. Pulse 108; temperature 101.2°.

May 1st.—10 A.M.: Passed a good night. The muscles of the legs now much relaxed, but the rigidity of the recti abdominis and masseter continues. At 5 P.M., as Dr. W. Begbie and I entered the room, he had just awoken out of a sleep. The start at our entering brought on a spasm, which soon passed off, and he took a good drink of milk from the