groups of cocci in the arterioles (bronchial) and capillaries. Examination of the heart, liver, spleen, and kidneys showed, in addition to the cloudy swelling usually seen in acute febrile conditions, the presence of a large number of minute abscesses varying in size from one millimetre to two millimetres in diameter. Gram-Weigert stained sections showed cocci in these abscesses and, in addition, minute arterioles and capillaries plugged with staphylococci. The condition in the heart might be taken as representative of what is seen in the other organs. Fig. 2 shows a small abscess beneath

FIG. 2.

Small abscess beneath the endocardium, showing a limited purulent exudation with the remnants of a few muscle fibres. $\times 100$. Stain, hæmatoxylin and eosin.

the endocardium and Fig. 3 a capillary loop plugged with staphylococci.

Conclusions.—The main interest of the case arises from the relation of the symptoms to the pathological findings. While in measles, especially in young children, a certain amount of nervous disturbance not infrequently accompanies a high temperature, with the decadence of the fever the

FIG. 3.

Capillary loop beneath the endocardium in the muscular tissue, plugged with staphylococci. $\times 1000$. Stain, Gram.

nervous symptoms always disappear. A true meningitis has not been recorded as complicating the onset of measles. In broncho-pneumonia, on the other hand, children often show signs of nervous disturbance; a commencing pneumonia is

not infrequently associated with an appearance of nervous depression, the child being dull, languid, and apathetic, while in other cases there is a considerable restlessness. It is, however, in advanced and protracted cases that evidence of cerebral disturbance is most frequently seen; in such cases there is incessant restlessness, sometimes convulsions, and subsequent rigidity or paresis of muscles. These cases are usually fatal and on post-mortem examination no abnormality of the brain or meninges can be detected microscopically. In other cases, again, a pneumococcic meningitis with the usual signs and symptoms may complicate the broncho-pneumonia.

The case under consideration presented evidence of nervous disturbance which, while it suggested meningitis, resembled more the extreme restlessness and delirium usually associated with acute osteomyelitis, acute phlegmonous cellulitis, or a very severe scarlet fever intoxication. The pathological examination, in view of the clinical symptoms, suggests the idea that there occurred in the lungs a severe inflammation the constitutional clinical manifestations of which resembled those of acute inflammation of bone or cellular tissue. The history of the case may be considered as (1) an inflammation due to the presence of a virulent form of staphylococcus aureus, beginning in the smaller bronchi and giving rise to the signs of a pulmonary consolidation; (2) the rapid progress and profuse infiltration and exudation giving rise to complete consolidation and atelectasis of the left lower lobe; and (3) the exalted virulence of the organism producing such a growth in the blood as to give rise to embolic infections of the various internal organs, leading to small abscess formations; and (4) the whole process resulting from infection by a highly virulent organism, the constitutional symptoms of intoxication overshadowed the effects of the local pulmonary lesion.

I am indebted to Dr. A. Johnston, physician superintendent of the Ruchill Fever Hospital, Glasgow, for permission to publish this case.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

A CASE OF TUBERCULOSIS PULMONALIS WITH SOME SYMPTOMS OF MENINGITIS; RECOVERY.

BY WILLIAM BERTRAM HILL, M.B., CH.B. VICT.,
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THE patient was a man, aged 26 years, who was admitted into the Leeds Sanatorium for Consumptives on Oct. 3rd, 1905, suffering from pulmonary tuberculosis which involved the upper and middle lobes of the right lung. On admission he weighed 9 stones 11½ pounds and measured 5 feet 10½ inches in height. His temperature at 4 P.M. was 99·2° F.; his pulse and respirations were respectively 78 and 20 per minute. His sputum measured about a quarter of an ounce daily; tubercle bacilli were present. There was marked dullness over the upper and middle lobes with bronchial breathing and whispering pectoriloquy; there were no râles. He was ordered to spend the whole day in the open air and his exercise was limited to one mile. He remained in this condition until Oct. 22nd, on which day his temperature varied from 100·2° to 101°; his pulse and respirations were respectively 80 and 18 per minute. His bowels were constipated. He complained of slight headache and vomited twice after food. On the 23rd his temperature varied from 99·2° to 102·8°; his pulse and respirations were respectively 80 and 18 per minute; his bowels were confined; his headache was more severe. On the 24th his temperature was still higher, reaching 105° at 4 P.M. The pain in the head was much increased; it was vertical in character, continuous, and at times was so acute that he cried out. He vomited after taking soda water and milk. His pulse was 80 per minute, full and bounding in character. At time she was slightly delirious. On the 25th it was noticed that there was an internal strabismus of the right eye and that the pupils were contracted, but reacted to light and accommodation. The patient himself complained that he did not seem to see

rightly. Ophthalmoscopic examination, however, revealed nothing abnormal. His temperature varied from 104° to 105°. Constipation and vomiting were present. The patient remained in this state until Nov. 7th. The strabismus was now well marked and complete constipation and severe headache were present. Only milk in small quantities was administered and this was occasionally returned. Ice was kept to the head and enemata and calomel were given to overcome the constipation. The muscles of the legs and arms showed neither paralysis nor rigidity and there were no convulsions. No enlargement of the spleen was made out, neither was there any involvement of the sphincters. The temperature still remained between 103° and 105° and was controlled by tepid sponging. At times the patient was slightly comatose. Occasionally, especially towards morning, he broke out in profuse sweats. On Nov. 7th he became a little clearer mentally and his temperature was slightly lower, varying from 100° to 100·4°. The headache was not so severe but the squint was still well marked. On the 8th his temperature varied from 99·6° to 100°; his pulse and respirations were respectively 80 and 20 per minute. The squint was still present. His mental condition was much improved and he was able to take more nourishment. On the 9th the temperature varied from 99° to 100°; the pulse and respirations were respectively 80 and 20 per minute. The squint was not so marked and the bowels were opened naturally. From this date the patient improved rapidly each day, the squint gradually disappearing and the temperature becoming lower, until it reached normal on the 14th, by which time also the eye symptoms had quite disappeared. Examination of the chest showed that there had been no increase in the physical signs. He remained in the sanatorium until January, 1906, on which date he was discharged. He then weighed 9 stones 12 pounds, the temperature was normal, and there was no sputum; his chest signs were as on admission. He was last seen on March 6th. There was then no increase in the physical signs and no loss of weight. His temperature was normal and his eyes were perfectly normal.

I am indebted to Mr. Herbert de Carle Woodcock for permission to publish this case.

A SEVERE CASE OF MYOCLONUS MULTIPLEX.

BY CAMPBELL DYKES, M.B. LOND.,
CAPTAIN, I.M.S.

THE patient, who was a man, aged about 35 years—a Hindu and a Brahmin by caste—first came under observation in July, 1905. The muscular spasms of which he complained had then been noticed for five months. The left arm was first affected, then the neck, and later the right arm. When he was first seen the whole upper part of the body was in a state of constant jactitation, the arms were violently extended at the elbows, the spine was arched, the head was over-extended, and the shoulders were drawn back. Neither the patient nor any of his family had ever suffered from epilepsy or any other nervous disorder.

On the patient's admission to hospital the earliest stage of the disease was seen in the rectus and obliquus externus abdominis and the gluteus maximus and tensor vaginæ femoris of both sides. In these muscles momentary contractions of a limited portion of the muscle were seen to occur, occasionally single but more often in definite groups of four or five occurring together. The corresponding muscles of opposite sides were involved but did not contract synchronously. So far the patient was completely unconscious of this early stage of the disease. A much more advanced stage was illustrated in the upper limbs, neck, and back. At uncertain and variable intervals a muscle or group of muscles, such as the triceps, the trapezius, or one or more of the muscles attached to the vertebral border of the scapula, suffered a succession of contractions, following each other so rapidly that a more or less complete "tonus" was produced. The bulk of muscle affected here—in contradistinction to those first described—was so considerable that "locomotor" effects were produced: the forearm was forcibly extended on the arm and the head on the trunk, the trunk itself was arched backward, and the shoulders were drawn back. When the attack was at its height several or all of these effects were produced together or followed each other in rapid but

irregular sequence. Each contraction appeared to last two or three minutes, then followed a short period of rest, then a fresh series of contractions, till apparently sheer exhaustion of the muscle brought temporary relief. The flexor muscles of the arms and the deltoids as also all the muscles of the forearm remained unaffected. The pectorals were for a long time unaffected but have recently shown the partial contractions described in the case of the abdominal muscles.

The muscles of opposite sides of the neck and trunk usually act coördinately producing extension directly backwards, but occasionally one sterno-mastoid contracts alone and lateral flexion of the lumbar spine has been recently noticed to occur. Voluntary movements of the upper part of the trunk and upper limbs are naturally much interfered with but can be fairly accurately executed if they require but momentary effort. There is no true ataxy. The gait is affected only indirectly. It remains but to notice that while the extrinsic muscles of the eyeballs have escaped, the orbicularis palpebrarum shares in the spasms which during their continuance can only be momentarily checked by voluntary effort so as to allow of a single glance being directed at an object. Extraordinary facial contortions are produced by irregular contractions of the lip and face muscles.

The patient himself believes that the movements are less violent when he is lying down than when he is sitting or standing, but I cannot satisfy myself that this is so. The movements cease entirely during sleep and his general health is unaffected except by the painful fatigue which results from the muscular contractions. The knee-jerks are exaggerated. There is no ankle clonus or any affection of sensation.

Of late the disease has begun to affect some fresh muscles, the hamstrings, pectorals, temporals, and masseters, and during the eight months that he has been under observation the abdominal muscles, of which at first only small segments suffered, have become more severely affected. Great relief has been experienced from the use of preparations of belladonna, whether administered internally in the form of the extract or hypodermically as a solution of atropine, and from the application of the constant current to the spine. The amelioration, however, is very temporary, lasting only for two or three hours or less. No benefit has resulted from the use of arsenic or bromide, though pushed to the limit of toleration.

Shortly after the onset of the disease the patient began to take opium but although he has taken as much as 24 grains a day no good effect can be attributed to it. In spite of the temporary mitigation of symptoms by treatment, the disease shows a distinct tendency to increase both as to violence of movement and as to the groups of muscles involved. Appetite and sleep remain unimpaired as yet but the patient finds his condition so miserable, partly from his inability to follow any of his ordinary occupations or even to feed himself without great difficulty and partly from his having become an object of ridicule or aversion to his neighbours, that he has already once attempted suicide by throwing himself into the Ganges.

Fatehgarh.

A Mirror

OF

HOSPITAL PRACTICE, BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

BRADFORD ROYAL INFIRMARY.

THREE CASES OF MYELOID LEUKÆMIA.

(Under the care of Dr. H. J. CAMPBELL.)

FOR the notes of the cases we are indebted to Dr. A. W. Falconer, house physician.

CASE 1.—A man, aged 26 years, was admitted to the Bradford Royal Infirmary on March 28th, 1906, under the care of Dr. H. J. Campbell. For some weeks he had not been feeling well and had been treated by his medical man for debility. A fortnight before admission he was suddenly