At thirty-five of the autopsies blood-agar cultures from the hepatized lung were made. Colonies of influenza bacilli were obtained in 15 cases (43 per cent.), staphylococci in 19 cases (54 per cent.), streptococci in 19 cases (54 per cent.), pneumococci in 2 cases (6 per cent.), *M. tetragenus* in 1 case (3 per cent.), and Gram-positive bacilli in 1 case. Influenza bacilli and staphylococci were obtained in 3 cases, influenza bacilli and streptococci in 5 cases, influenza bacilli, staphylococci, and streptococci in 2 cases, influenza bacilli, staphylococci, and pneumococci in 1 case, staphylococci and streptococci in 8 cases, streptococci and *M. tetragenus* in 1 case. In one case no growth was obtained.

The blood-agar medium was made by adding to peptone meat extract agar (previously melted at 100° C. and then cooled to 50° C. to 45° C.) 10 per cent. of a solution of blood (warmed to 40° C.). The latter solution was prepared by mixing 5 c.cm. of human blood, withdrawn from a vein, with 95 c.cm. of sterile 0.85 per cent. sodium chloride solution, and then laking by the addition of 10 c.cm. of ether. Colonies of influenza bacilli were isolated by plating out.

In several instances influenza bacilli could not be obtained in culture though present in the lung exudate; the reverse was also observed. In three cases influenza bacilli were found in the sputum, but subsequently at the autopsy could not be recognized in the lung exudate on microscopical examination of a smear preparation; in one of these cases however, colonies of influenza bacilli were obtained on culture from the lung exudate.

If all observations are grouped together (sputum, smear from lung exudate, culture from lung exudate) the following figures are obtained: Influenza bacilli were found in 56 per cent. of the cases; staphylococci in 51 per cent.; streptococci in 49 per cent.; pneumococci in 18.5 per cent.; *Diplococcus catarrhalis* in 7 per cent.

The cases first occurring were of a severe type rapidly terminating fatally; subsequent cases were of longer duration, and were frequently complicated with pleural effusion and empyema.

CHRONIC TRENCH FEVER.

BY

GORDON WARD, M.D.

DURING the last few years many cases of trench fever have passed through the hands of medical officers, and the disease is likely to trouble us and our patients for some years to come. For this reason I am prompted to send a note of two cases which exemplify somewhat unusual symptoms, although such as the nature of the disease would lead us to expect.

CASE I.

Pte. C. W. B., Royal Warwicks, was admitted to hospital as a N.Y.D. case. He complained of extreme pain in the head and legs, and of sleeplessness due to the pain. He presented the following signs, namely, frequent sweating, irregular temperature, never above 100° at night, and showing no definite periodicity, occasional vomiting, and more frequent nausea; pulse rate varying from 76 to 116, and the typical hyperalgesic

areas (C8 and D1; D 7, 8, 9; all lumbar) described by Carmalt-Jones. A diagnosis of trench fever seemed fully justified. It was thought that cases of trench fever with small evening pyrexia might show a much larger swing than normal below the normal line. A few cases and a few controls from other

cases were therefore put on special charts. This case was the best example obtained of the phenomenon expected. Chart herewith shows this. It was not found to anything approaching the same extent in any case not trench fever. Possibly this may be of some assistance in diagnosis.

It was very difficult to obtain accurate records of pulse rate in all cases, but it may be stated that this followed the temperature pretty accurately except that the prevailing rate was lower after he had been in bed a week. Case II is an example of vasomotor symptoms. These have not attracted much notice but are mentioned in the American report. Analogy with malaria led me to look for them, and some degree of "dead fingers" and "dead feet" was noted in several cases. Cases were not included unless the "dead areas" were obvious to sight and touch. Other symptoms of the same order resembled giant urticaria and erythromelalgia.

CASE II.

Rfn. A. E. B., K.R.R.C., was admitted with typical acute trench fever. In the first seventeen days he had four bouts of pyrexia. After this the temperature became irregular. On the twenty-sixth day he had acute pain in the legs, which were observed to be very red (the feet only). This was much increased when the legs were allowed to hang over the edge of the bed. This erythromelalgic syndrome was not observed again. On the twenty-ninth and thirtieth days he had slight haematuria, the urine contained a few granular blood casts. On the thirty-second day the urine was free from albumin and casts and remained so. At the same time as the haematuria there was some oedema of the calves of the legs, there was none of the feet. The oedema was very slight. There was no other oedema. His temperature was 101° on the two days of haematuria, afterwards it did not exceed 99°. His pulse was usually between 60 and 80; it was not recorded in the acute stage of his illness except on admission, when it was 116. He was up on the fortieth day, and sent to England on the forty-second.

Case II did not suffer from dead fingers, and the erythromelalgic symptoms were only present on one occasion. I consider that the haematuria was not significant of a kidney lesion but rather analogous to the occasional haematuria of malaria. It may have been haemoglobinuria, and this seems probable on theoretical grounds. It was not reported until the thirty-ninth day, and the next specimen obtained did not contain blood cells but only casts containing yellow pigment. The quick disappearance of urinary signs is also significant. I have seen oedema of the calves also in malaria in the absence of albuminuria. This note does not profess to be complete; it was very difficult to carry out detailed investigations in France, but I hope that, in spite of this, the mere mention of such symptoms may be of use to others and of interest from the theoretical side.

April 20th, 1919.

Kettsomian Lectures

ON

JAUNDICE: WITH SPECIAL REFERENCE TO TYPES OCCURRING DURING THE WAR.*

By WILLIAM HENRY WILLCOX, C.B., C.M.G.,

M.D. LOND., F.R.C.P. LOND., COLONEL A.M.S.,

PHYSICIAN TO OUT-PATIENTS, ST. MARY'S HOSPITAL, LONDON.

LECTURE III.—PART II.

SPIROCHAETAL AND ACHOLURIC JAUNDICE, Etc.

INFECTIVE JAUNDICE IN SPIROCHAETOSIS ICTERO-HAEMORRHAGICA.

THIS form of jaundice was first differentiated by two Japanese workers, Inada and Ido,¹⁰ in November, 1914, who made a brilliant investigation into the etiology, symptomatology, and pathology of the disease.

In September, 1916, Captain A. Stokes, R.A.M.C., and Captain J. A. Ryle, R.A.M.C., published¹¹ an account of several cases they had carefully investigated amongst our troops in Flanders, and later, in January, 1917,¹² they published a further account of this work. Major-General Sir Bertrand Dawson, Lieut.-Colonel Hume, R.A.M.C., and Captain S. P. Bedson, working independently, published¹³ a very complete account of their observations on cases

* Delivered before the Medical Society of London, April-May, 1919.