CASE OF ENTERIC FEVER COMPLICATED WITH DIPHTHERIA: DEATH.

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(From notes made by Captain J. C. B. Statham and Lieutenant H. T. M. Wilson, R.A.M.C.).

PRIVATE R. L., 1st Battalion Northumberland Fusiliers, aged 25, service one year and four months, was invalided with "disordered action of the heart," from Mauritius, in the s.s. "Newark Castle," on March 4th, 1905, and, on disembarkation at Southampton, he was transferred to the Royal Victoria Hospital, Netley, on April 30th, and placed in a ward with other convalescent patients. He stated that a lady on board the "Newark Castle" had suffered from enteric fever, and another soldier, who travelled from Mauritius by the same ship, developed enteric fever eight days after arrival at Netley, so that the disease appears to have been contracted on board ship. He had not been inoculated against enteric fever, and he had not suffered from a previous attack of this disease.

From May 1st to 7th he suffered from general malaise. On May 8th his temperature was 102.4° F. in the evening, tongue furred, diarrhœa present, with loose yellow motions, rose-coloured spots on the abdomen and chest, pulse rapid and weak, and he complained of headache.

From May 9th to 17th his temperature ranged between 100° F. and 105.8° F. in the morning, and between 101.2° F. and 104.8° F. in the evening. The highest temperature of 105.8° F. was recorded six hours before death. During the same period the pulse gradually rose from 96 to 105 beats per minute to 120 to 144 beats on May 16th, but fell to 57 beats two hours before death. The respirations were rapid throughout the last seven days of his illness, rising from 24 to 32 per minute on May 12th to 40 to 64 per minute on May 16th, and 56 to 60 per minute on the day of his death. From May 10th to 17th his bowels were moved daily, except on May 13th, the number of motions ranging from 2 to 4 a day. On May 9th the abdomen was distended. Temperature 104.8° F., reduced to 103.6° F. by sponging. On May 11th Widal's test for enteric fever gave a positive reaction up to 1-160 dilution in sedimentation tube, and a positive reaction in ten minutes in 1-40 dilution hanging drop. The patient's mouth was very dirty, and there was a whitish membrane on the soft palate. On May 12th smears from a throat swab showed large numbers of staphylococci and streptococci, and
a very few bacilli, which gave Neisser's staining reaction. Smears from another throat swab, taken later the same day, showed the presence of the Kleb's bacillus of diphtheria. There was gurgling on pressure over the right iliac fossa. On May 13th he was delirious. Sponging employed to reduce pyrexia. On May 14th, 10,000 units of diphtheria antitoxic serum (about a month old) were injected into the subcutaneous connective tissue of the neck, but its use was not followed by any improvement in the patient's condition, and it had no effect on the temperature, pulse, or breathing. On May 15th there was no improvement; he was unconscious, and his temperature was 104·0° F. at 6 p.m. Cold sponging and an ice cradle over body only reduced the temperature to 103° F.

On May 16th he was in a comatose condition. Liquor strychnin. were injected hypodermically every four hours. On May 17th his temperature rose to 105·8° F. at 10 a.m., fell to 103° F. after sponging, but rose again to 105·2° F. at 2 p.m., and he died at 3.55 p.m. on the seventeenth day after invasion of enteric fever, and on the seventh day after the diphtheritic condition of the throat was first observed. His diet consisted of milk, beef tea, Brand's essence of chicken, soda water, lemon juice, brandy and champagne.

Post-mortem Appearances Eighteen Hours after Death.—The body showed livid patches of stasis and commencing post-mortem changes in all dependent parts. The right lung weighed 20½ ozs., and it was slightly adherent to the chest wall. The left lung weighed 23 ozs., and its pleural membrane was healthy. The lungs, except for a little con-
gestion at the bases and that they contained an excess of frothy mucus, were healthy. The heart weighed 13 ozs. There was some dilata-
tion of the right side, and some hypertrophy of the left ventricle was present. The pericardium and heart muscle were healthy. The valve measurements were: Tricuspid five and three-quarter inches, mitral five and a half inches, pulmonary three and a half inches, and aortic two and three-quarter inches, from which it will be seen that the tricuspid and pulmonary valves were somewhat dilated, and the mitral valve slightly dilated. The abdomen was tympanitic, the intestines being much distended with gas. The liver was enlarged, congested, and weighed 74 1/2 ozs. The spleen was much enlarged, soft, and weighed 25 ozs. The pancreas was healthy. The kidneys were congested, but otherwise healthy. The right kidney weighed 6 ozs. and the left 6 ozs. The ileum showed patches of ulceration and enlargement of Peyer's patches in its lower third. The ulcers were longitudinal and characteristically enteric in appearance. The mesenteric glands were somewhat red and enlarged. The cæcum and colon were healthy. An effort to examine the fauces was made, but found impracticable, on account of rigor mortis and rapid post-mortem decomposition having set in early. Cultures made from the spleen, both in broth and agar, proved the presence of a non-Gram staining, motile, short, rod-like bacillus, probably the Bacillus typhosus.

This case is interesting from the co-existence of enteric fever and diphtheria in the same patient, the diphtheria having been first observed on the eleventh day after invasion of enteric fever, although it may have been present somewhat sooner than the day on which it was first recognised. The source of infection of the diphtheria has not been traced, there having been no cases of the disease under treatment in the Medical Division during the last two and a half years. The ward orderly who attended the patient after his transfer to the enteric fever ward on May 11th, the day on which the false membrane was first observed in the throat, was admitted into hospital the following day with "inflammation of the pharynx." The Kleb's bacillus of diphtheria was not found in smears from his throat, and the patient recovered and was discharged to duty on May 31st.

NOTES ON A CASE OF ROUND-CELLED SARCOMA OF THE MEDIASTINUM.

By Captain F. W. Cotton.

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Private C., aged 22, service four years. This patient was in good health until the beginning of July, 1904, when he began to complain of cough, varying pains in his chest, and shortness of breath. On October 10th, 1904, he was admitted to the Murree Hospital from the