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may occur, and to a presentation of the diseases which may present such signs or symptoms.

To give an example of the method used, we may take the respiratory system. After the preliminary concise description of the anatomical and physiological features, the system is treated under the following headings: Examination of the Chest; Coughs; The Sputum and Hæmorrhages; The Mediastinum; Consolidation of the Lung; Instrumental Examinations; Exploratory Puncture; X-ray Examination.

The methods of examination, instrumental and non-instrumental, are well described, and the simpler laboratory examinations of urine, blood, etc., are adequately dealt with. Interpretations of the results of other tests and of radiograms which may assist the investigator to arrive at a correct diagnosis are also included. These radiograms, with which the text is illustrated, are beautifully reproduced.

The student who sets himself to master the contents of this volume will have laid for himself the foundation of a sound clinical knowledge, and if he can apply its teaching to his daily hospital work he will have little to fear from the most critical examiner. It is not to be inferred that it is a cram book—on the contrary, there are few, if any students, qualified or unqualified, who will not benefit by its study.

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BACILLUS AERTRYCKE—THE POSSIBLE CAUSATIVE BACILLUS OF CANINE TYPHUS.

TO THE EDITOR OF THE "JOURNAL OF THE ROYAL ARMY MEDICAL CORPS."

SIR,—I was greatly interested to read Major Manifold’s article on this subject in last month’s Journal of the Royal Army Medical Corps. When I took over the District Laboratory, Poona, from Major Manifold, in October, 1926, he referred to his investigations in this direction. It so happened that I was then looking after two dogs, a Labrador and an Irish terrier, belonging to a brother officer on leave in England. The dogs were handed over to me in July, 1926, and both appeared to be out of condition. The prominent symptom at this stage was a frequent cough usually followed by vomiting. They became less active and developed a foul breath and emitted most offensive effluvia per rectum. They became rapidly emaciated until I took them to the hills in September, where they appeared to improve greatly. The improvement was maintained until I was transferred to Poona. Within a week of my transfer the Labrador became acutely ill, there was marked emaciation and anaemia accompanied by fever, she refused all food with the exception of milk. She eventually developed
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paralysis of the hind limbs and died within three days of the onset of the latter symptom. A partial post-mortem examination was performed, but, to my subsequent regret, I neglected to examine the alimentary tract. The spleen was greatly enlarged and congested. Five cubic centimetres of heart's blood were withdrawn and incubated in ten cubic centimetres of bile medium for forty-eight hours. On plating out on litmus lactose agar a non-lactose fermenting organism was obtained in pure culture, giving the morphological characteristics and biochemical reactions of the Salmonella group. The organism was agglutinated by Bacillus aertrycke (Mutton) specific high-titre serum. It is, therefore, reasonable to presume that the organism isolated was B. aertrycke, Mutton type. I took no further steps to prove the organism and on my subsequent transfer to Secunderabad the culture was lost.

The fox terrier went gradually downhill with emaciation and anemia in which condition I returned him to his owner in April, 1927. I afterwards learned that he soon died with end symptoms resembling those of the Labrador.

In Secunderabad I found there was a heavy canine mortality. This was almost entirely restricted to imported dogs, the station-bred animals being apparently healthy. The popular diagnosis was "piroplasmosis" and trypan-blue was extensively employed for treatment. I obtained dozens of blood-films from suspected cases of this disease but in no case was I able to find a single piroplasm. In about twenty-five per cent of cases the dogs' serum agglutinated the stock laboratory culture of B. aertrycke (Mutton) in dilutions varying from 1 in 125 to 1 in 250. The dogs were usually brought to the laboratory in the early stages of the disease, in many cases, probably, before agglutinin formation had commenced. I am of the opinion that, had I had subsequent opportunities of testing these dogs in the later stages of the disease, the percentage showing agglutinins would have been much higher.

A curative aertrycke vaccine recently has been prepared, the initial dose administered being 250,000,000 organisms per cubic centimetre. The results so far appear to be encouraging. A prophylactic vaccine is also under trial, but it is yet too early to give an opinion as to its efficacy against canine typhus.

These findings would appear to support Major Manifold's suggestion that B. aertrycke may be the cause of canine typhus.

District Laboratory, Secunderabad, India.

January 14, 1929.

I am, Sir, etc.,

W. Walker,

Major, RAMC.