gestion at the bases and that they contained an excess of frothy mucus, were healthy. The heart weighed 13 ozs. There was some dilatation 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 74½ 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 caecum 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.

Royal Army Medical Corps.

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
line of march. Examination of the chest revealed patches of dulness on percussion over the apex of the left lung in front and behind. At these patches the air did not enter freely, vocal fremitus was diminished and vocal resonance altered in character. There were moist sounds heard all over the chest, but the expectoration was scanty, and contained no tubercle bacilli. There was a paroxysmal cough with much engorgement of the superficial veins during the paroxysms. The digestive organs were healthy, and there was no fever, nor was there any history of any rigors. Three weeks after admission the glands at the root of the neck on both sides, those in the left axilla and in both groins were noticed to be enlarged. The diagnosis of the case was doubtful, it being considered that the man was suffering from tuberculosis, lymphadenoma, or "bronchitic asthma with some underlying condition at present undetermined."

On November 3rd this patient was transferred to Nowshera from the hills. His condition then was as follows: Weight 8 st. 9 lbs. Voice slightly forced and metallic in tone. Cough dry and paroxysmal. The superficial veins of the abdomen, chest and neck stood out very clearly during each fit of coughing. The glands of the neck, groins and axilla were all enlarged. The spleen and liver were of normal size, but the mesenteric glands could be readily felt through the walls of the abdomen. The physical signs of the chest were the same as noted above. The blood on examination was found to be practically normal, and again no tubercle bacilli could be found in the sputum. Gradually his condition became worse, his breathing more laboured and he could not bear the weight of the bedclothes on his chest, as they "seemed to stifle" him. He frequently had attacks of orthopnoea during the nights, and after these attacks his face remained somewhat cyanosed in the mornings.

On November 25th he had not lost weight, but the glands at the base of the neck in front had enlarged to the size of marbles; those in the left axilla and the groins had also increased in size, while those in the former position were painful on pressure. The heart sounds had become weak, and the pulse rate, increased to 100 per minute, was dicrotic and easily compressible. On percussion of the chest, the whole post-sternal area was dull and resistant, and the dulness extended over the left apex of the lung in front and behind. The respiratory murmur gave no definite indications of the condition of the lung. Inspiration was short and jerky, and expiration prolonged and wheezing or cavernous on both sides of the chest in front, while behind the breath sounds were weak, and many rhonchi were heard.

He became rapidly worse on December 1st and complained of "something at the top of the chest which he could not cough up." Dyspnoea and cyanosis became very marked, and he died on December 3rd, presenting all the symptoms of pressure on the trachea. Throughout his illness his temperature remained normal, except on the day of his admission to hospital at Murree.
Post-mortem Examination.—Body fairly well nourished. Glands before mentioned enlarged. Superficial abdominal veins well marked. On opening the abdomen nothing unusual was to be seen. On removing the sternum it was found to be bound down by strong adhesions to a dull white coloured tumour occupying the whole of the anterior mediastinum. This tumour covered the pericardium and was adherent to the right ribs concealing the lung. On the left it was adherent to the first two ribs, but below the second rib the edge of the left lung could be seen in a collapsed condition. On separating the adhesions the tumour was found to extend round both sides of the pericardium into the posterior mediastinum, taking in all the structures in this space, to be there attached to the spine. Below, it was adherent to the diaphragm around the pericardium; above, it ended in a bright red mass, probably the thymus. It also extended to the left and was intimately connected with the upper lobe of the left lung. On removal of that portion of the tumour in front of and above the heart, it was found to weigh 3½ lbs., and contained the lower portion of the trachea and its bifurcation, and also the roots of all the great vessels. On the right side behind there were a few glands about the the size of marbles, blackish in colour and broken down; and that portion of the tumour remaining in the posterior mediastinum had enlarged broken-down glands associated with it. On section of the tumour a gritty sensation as of cutting cartilage was felt. The appearance of the section was grey in colour with numerous white patches, which on examination proved to be cartilage. There were also several small round points surrounded by concentric markings which were joined and pressed together by connective tissue. The growth was intimately connected with the great vessels, but had not penetrated the arterial walls nor diminished their calibre, while the hardest part of it was connected with the apex of the left lung.

Pericardium.—The cavity of the pericardium was much enlarged and on opening it a small quantity of cloudy serous fluid escaped. Its inner surface was reddish-yellow in colour and rugiform in appearance. The pericardium could not be separated from the tumour.

Heart.—Weight 1 lb. In appearance it was similar to the inner surface of the pericardium. Left ventricle enlarged. The walls of the right ventricle thicker than normal. The valves and orifices normal in appearance.

Right Lung.—Weight 1 lb. 8 ozs. There was a small serous effusion in the pleural cavity. The pleura was thickened and white, and adherent to the ribs at the side, and to the growth behind. On section the lung was of a brick red colour, dry and fibrous. All parts floated in water.

Left Lung.—Weight 2 lbs. The pleura was firmly adherent at the apex and posterior parts, and its cavity contained a small amount of serous fluid. The upper lobe was firmly connected with the new growth, which so compressed it that it measured only about half an inch in thick-
Clinical and other Notes

ness. The anterior border was white, collapsed and rounded, and did not float in water.

Liver and Spleen.—Normal.

Kidneys.—Right 8 ozs., left 10 ozs. in weight. On the outer surfaces were numerous bosses about the size of marbles. The capsule stripped easily. On section these bosses were found to be roughly wedge-shaped, and to extend about a quarter of an inch into the kidney substance. In the right kidney they were of a whitish colour, and in the left of a mulberry colour.

Intestines.—In the lower parts of the small intestine there were patches very deeply injected and smooth.

Pancreas.—The head was enlarged, friable and soft, like a breaking-down gland and intimately connected with some of the mesenteric glands.

Mesenteric Glands.—All enlarged to about the size of marbles, greyish in colour, and appeared to be breaking down.

Portions of the tumour and kidneys were examined microscopically at the Pasteur Institute at Kasauli by Captain Lamb, I.M.S., and found to be of the round-celled variety of sarcoma.

FRACTURE OF CERVICAL VERTEBRA.

By Captain L. ADDAMS-WILLIAMS.

Royal Army Medical Corps.

March 24th, 1905.—Private J. Q., admitted to B1 Ward, Military Hospital, Standerton, at 12 noon on this date.

History.—He fell through an open window on the previous night a distance of six feet, backwards, on to his head, when attending a concert in Barracks. He stated that he was unconscious for two hours after the accident.

Condition.—He complained of pain over the back of the neck, in the region of the seventh cervical vertebra. He was completely paralysed from his neck downwards, including both arms and all respiratory and abdominal muscles, with the exception of the diaphragm. There was loss of sensation over the same area, with the exception of the front of the chest as far down as both nipples. All reflexes, both superficial and deep, had disappeared.

Pulse 60, temperature 96° F., respirations 24, shallow and abdominal. He was conscious. Sight normal.

There was some swelling at the back of the neck over the region of the pain complained of, but no inequality of bone could be felt.

At 6 p.m. his condition was much the same, with the exception that a zone of hyperaesthesia had appeared at the level of the clavicles. Pulse 76; temperature had risen 3½ degrees to 99-6° F. At 10 p.m. his temperature had risen to 105° F., pulse to 120, respiration shallower.