

mount up." Asked if he would say that the arrival of the "Niagara" was the date when the outburst spread over the community, he said, "Yes, that was my opinion."

Immediately before closing our Auckland sitting, Dr. Milsom, of Auckland, president of the Auckland Branch of the New Zealand Division of the British Medical Association, recalled for another purpose, stated, as part of the grounds of the opinion (conveyed by him to us) of the association that the "Niagara" was the cause of the epidemic, the fact that on Saturday night of the 12th October he went to the Hospital to do some surgical work, and Dr. Hall (Resident Medical Officer of the Auckland Hospital) told him they had some cases in from the "Niagara." He described the cases, and said he would very much like Dr. Milsom to see them because they were such extraordinary cases. Later he saw them, and he says he never saw the like before. He stated later that he had had a case of a woman in a private hospital—of a patient similar to this; but, he adds, this was not in the usual run of those cases. She had a bronchitis and a pneumonia, but nothing like those serious cyanosed cases we had in the epidemic, the dreadful toxæmia or poisoning cases.

At our request Dr. Hall forwarded a memorandum on these cases, which is as follows:—

Auckland Hospital, Park Road, 27th March, 1919.

Memorandum for the Secretary, Epidemic Commission.

On the 12th October, 1918, I was called by Dr. Grant, Senior Medical Officer of the Auckland Hospital, then Acting Medical Superintendent, to assist with the examinations and treatment of the "Niagara" patients admitted on that date.

Among the cases I was struck in several instances by the peculiar conditions found while examining.

1. *Owen Quinn, Oil-burner*.—On admission, mottled cyanosis, face and upper limbs. Pneumonia present. Sounds in chest, suggesting a capillary bronchitis, as though the patient was being drowned by his own secretions. This patient had been ill for ten days previous to admission to the Hospital, and he died eight days later. I heard subsequently that he had been gassed in France.

2. *William Thomas, Steward*.—This patient was ill about ten days before admission. On admission he was delirious and cyanosed. Pneumonia present; peculiar bubbling sounds in chest, but not so marked as in the previous case. Nine days later this man was discharged from Hospital apparently relieved. He died either in Australia or on the "Niagara."

3. *Walter Dalziel, Gunner*.—Ill nine days before admission. Epistaxis severe. Delirious and comatose on admission. Severe gastro-intestinal disturbance; vomiting; diarrhoea; foul breath. Widal reaction for typhoid was negative.

4. *Reginald Anrep, Steward*.—Ill nine days before admission. On admission he had a frightful cough of a hacking nature; cyanosed; capillary bronchitis; heart weakened.

5. *Frank Bull, Steward*.—Ill seven days previous to admission. On admission, capillary bronchitis in left lung. High temperature. Crisised quickly. Discharged nine or ten days later. Went to Sydney and back to Vancouver. On the way across he was landed at Honolulu, and put in hospital there, complaining of pain behind the eyes. Was picked up again by the "Niagara" and brought to Hospital in Auckland on the 30th December, 1918, and he died on the 19th February, 1919. A post-mortem examination showed a large cerebral abscess present.

6. *James Smith, Fireman*.—Ill ten days before admission. On admission he had a cough. Not a very severe case; few pneumonic symptoms. Case of pure influenza, and was one of the mildest in Hospital.

The onset was practically the same in all cases—viz., headache, pains in back and limbs, feverishness, shivering, loss of appetite, vomiting. The disease ran its course in about three weeks, the patients being ill about ten days before admission and about ten days afterwards. Cases on discharge required some convalescence, although by this time all constitutional symptoms of the disease had disappeared. On examination nearly all the men complained of the insanitary state of their surroundings, the foul air they had to breathe, the unpalatable nature of the food provided, and the lack of necessities. The cases above detailed represent the general type of case met with during the epidemic in November. In the bad cases mentioned I had never seen anything so severe before.

On the evening of the 12th October I mentioned to Dr. Milsom the peculiar symptomatology of the cases, and while discussing the causation of the symptoms in so far as the diagnosis was in doubt, and inasmuch as there had been discussion as to the nature of the disease which had then recently caused a great percentage of deaths on a transport bound for England, I merely, as a matter of scientific interest, asked him if he would care to have a look at the cases.

Dr. Milsom saw these cases two or three days later, and the symptoms were then much the same as on the admission of the patients to Hospital.

RICHARD J. B. HALL,
Resident Medical Officer.