repapered or distempered. The destruction and disposal of rats over a wide area was undertaken by the sanitary authority, willingly assisted by the public, and this is meanwhile being done methodically and with excellent results.

I am indebted to Dr. Carey of Holbrook for notes on the cases in C.'s family; to Dr. Brown of Ipswich for much valuable advice at the consultation; and to Dr. Heath for his bacteriological examinations.

THE RECENT PLAGUE CASES IN SUFFOLK.

BY
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MUCH interest has been aroused by the recent death of four people from pneumonic plague at the village of Freston, four miles from Ipswich, and the subsequent discovery that the disease is fairly widely spread among rats and other rodents in this part of Suffolk.

On September 13th a little girl of 9, living with her mother, stepfather, and two or three other children in a small cottage at Freston, became ill. Vomiting was the first symptom. On the 14th she was seen by Dr. Carey of Holbrook, to whom I am indebted for notes of this and the succeeding case. At his first visit Dr. Carey found a temperature of 105° but no signs of pneumonia. On the following day, September 15th, bronchial breathing was detected at the base of one lung. She had been delirious during the night before, but not in the day, though rather drowsy. During the following night the cough was somewhat troublesome, and there was vomiting and diarrhoea.

She died on the next day, September 16th. The temperature throughout had been about 105°. She was nursed by her mother, Mrs. C., and was buried on September 20th.

On September 21st Mrs. C., the mother, was taken ill. She got up as usual on that morning, but complained of headache and a feeling of sickness.

Next day, September 22nd, Dr. Carey was sent for. He saw her at 3 p.m. He found a temperature of nearly 105°, rather rapid respiration, and crepitant râles at the bases of both lungs.

During the night of the 22nd there was vomiting and diarrhoea.

On the 23rd she was seen by Dr. Carey at 10 a.m. She was almost pulseless, respiration laboured and gasping. He sent to ask me to see her in consultation with him, but she was already dead when I arrived at about 12 noon. I took away some sputum for bacteriological examination. The sputum was brownish in colour, as though tinged with anchovy sauce, and did not at all resemble ordinary pneumonic sputum.

I gave the sputum to Dr. Heath for examination, who reported that it contained pneumococci and Gram-negative diplobacilli in large numbers.

On the 26th G. C., the husband of the last patient, and Mrs. P., who had nursed her during the night of the 22nd, were both taken ill. Dr. Carey informed me of the occurrence on the 27th, but as I was unable to visit them that evening I asked Dr. Heath to go instead. He saw G. C. and obtained some blood from the ear for examination.

On the 28th I visited both patients in consultation with Dr. Carey and Dr. Sleigh, and took a syringe of blood from the basilic vein of G. C., and fluid from puncturing the pneumonic lung in the case of Mrs. P. This material I gave to Dr. Heath, who made cultures in agar and bouillon and prepared films.

The films, especially those from the pneumonic lung, showed very numerous bacilli, identical with plague bacilli, with the typical bipolar staining, and the cultures in bouillon, the characteristic "stalactite" growth. The cultures and films were at once submitted by Dr. Heath to Professor Sims Woodhead, of Cambridge, who confirmed his diagnosis, and later to Professor Klein and Professor W. G. R. Simpson.

The course of the disease in these two cases was as follows:

G. C., who was a farm labourer, started to work as usual on the morning of September 26th, but complained

of backache and "feeling bad." He attended his wife's funeral on that day and then went to bed.

On September 27th he was seen by Dr. Carey. He was flushed; temperature 103°. He had not vomited, and there were no signs of mischief in the lungs. A nurse was sent from Ipswich on this evening.

On September 28th I saw him with Dr. Carey. He was very flushed and rather drowsy and lethargic, but complained of no pain. On examination of the lungs, I found no dullness or bronchial breathing, but moist crepitant râles over both bases. During the night his temperature was 104° or 105°. He slept at intervals, took nourishment well. He complained of thirst, and of feeling drowsy, but had no pain. There was slight cough and some expectoration. Pulse about 120. Respirations from 30 to 40. He perspired freely. There was no diarrhoea or vomiting.

On the 29th his condition was much the same, temperature a little lower. There was no loss of consciousness or marked change until three minutes before death, which took place at 7 p.m.

Mrs. P., the neighbour who had nursed Mrs. C., was taken ill on the morning of the 26th.

In her case pneumonic symptoms were prominent from the first. She had a high temperature from the commencement, and on the 27th there were obvious signs of pneumonia in the left lung.

She was treated by Dr. Sleigh, of Holbrook.

A nurse from Ipswich took charge of her and G. C. on the night of the 27th. She complained of severe pain on the left side of the chest, near the angle of the scapula. The left side of the face was very flushed. She lay generally on her right side. She coughed very little during the night, and there was no expectoration. Temperature from 103° to 104° F. No delirium; no diarrhoea or vomiting.

On the 28th I saw her with Dr. Sleigh at 11.30 a.m. The respiration was about 50, laboured and rattling; pulse 130, very compressible. Face livid. There was dullness to percussion over the left back, as high as spine of scapula, and bronchial breathing. There was also dullness and signs of consolidation at the extreme right base.

During the night of the 28th she complained of severe pain in the left side. Vomiting and diarrhoea came on at very frequent intervals till death, which took place on the morning of the 29th.

There had been no loss of consciousness and no delirium. Some cough, but not much expectoration. Temperature 105.6° F. before death.

In all four cases death occurred after a short illness, in only one as late as the fourth day. In all cases there was definite evidence of lung congestion, although in only one was there extensive pneumonic consolidation; and in all except one there was diarrhoea and vomiting before death. The temperature in all was high, from 103° to 105° F. or over, and they were conscious throughout, almost up to the moment of death.

The characteristic bipolar-staining bacilli were found in the sputum of the second case, in the blood of G. C., and in the fluid from the lung of Mrs. P. In this last they were exceedingly numerous.

When the nature of the disease was determined, all who had been in contact were isolated, and the cottages thoroughly disinfected. There have been no fresh cases since.

As numerous rats and some hares and rabbits had been dying in the neighbourhood, two rats and a hare were sent to the Local Government Board, and submitted to Professor Klein for examination. In each the presence of plague bacilli was proved.

Many rats and other animals have been since examined by Dr. Heath and others, and it is evident that the infection among these animals is fairly widely spread; but owing to the energetic measures which have been and are still being taken, it is hoped that the disease may be stamped out.

No case of infection among rats has been found within the borough of Ipswich.

The late Dr. William Thomas Law, of Bournemouth, left estate valued at £8,950 gross, with net personalty £8,536.