

PROBABLE CASES OF CRIMEAN-CONGO-HAEMORRHAGIC FEVER IN BULGARIA: A PRELIMINARY REPORT

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Between 20 March and 10 April 2008, six probable Crimean-Congo-haemorrhagic fever (CCHF) cases were reported in the municipality of Gotse Delchev, in Blagoevgrad district, Bulgaria, an area bordering Greece and Macedonia. CCHF is an endemic infection in Bulgaria, and particularly in this area. In recent years, several cases of CCHF have been reported (between two and 20 cases annually), with a mortality rate varying between 10 and 50 percent [1].

Description of the cases

The cases presented with different clinical manifestations. The first case was a man in his forties who became ill on 20 January with fever, myalgia and joint pain, one-day diarrhea and weakness. He was treated at home with aspirin, paracetamol, augmentin and diclac. On 25 March, epistaxis with heavy bleeding developed. A tamponade was applied at the otorhinolaryngology department of the local hospital. He was admitted in the infectious disease ward with a suspicion of haemorrhagic fever. His condition rapidly deteriorated (strongly expressed leuco- and thrombocytopenia) and he died on 26 March.

The second case was a man in his thirties from the same town. The illness began on 22 January with fever and weakness. On 26 March, he had bloody sputa and was taken into the infectious disease ward. On 27 March he was transferred to the infectious disease hospital in Sofia. He was discharged soon afterwards in good condition.

These two patients had, on 17 and 18 March, both removed, with unprotected hands, ticks from cows in the neighboring village and had taken part in the slaughter of a sick calf. The veterinary authorities reported the calf to have been sick from tannin poisoning.

The third case was a healthcare worker in her fifties who had taken care of the first patient when he was bleeding. Although she reported having used gloves, she was abundantly stained by blood and vomit from the patient. She received immunoprophylaxis by specific hyperimmune gamma globulin against CCHF. She was hospitalised on 2 April and discharged in good condition a week later.

The fourth case was a woman in her forties from the same town, a close family contact of the first patient. On 10 April, she

was hospitalised with fever, weakness, stomach pain, nausea and vomiting. She had contact with the first case's blood when he had a nose-bleed before being taken to the hospital. As a result, she received immunoprophylaxis by specific hyperimmune gamma globulin against CCHF. The symptoms of this patient were considerably less severe than in the other cases, and she was discharged from hospital in good condition on 18 April.

Two further cases were from other villages in the municipality and did not have any relationship to the cases described above. A man in his forties became ill on 31 March and a man in his sixties became ill on 9 April. They both had similar clinical pictures: fever, muscle and joint pain, weakness, and bleeding from the nose. It was ascertained that they had both removed ticks from cattle by hand. Following medical treatment, both are in good condition.

Investigation of the outbreak

A team of experts from the Ministry of Health, the National Centre for Infectious and Parasitic Diseases, and the Hospital for Infectious Diseases in Sofia, which included epidemiologists, virologists and infectious disease clinicians, have visited Gotse Delchev to perform an epidemiological investigation and consultations. The investigative team also included local specialists from the hospital, the Regional Inspectorates for Public Health Protection and Control and the Veterinary Service. The cases have been discussed by a wide circle of specialists in the Ministry of Health and the conclusion has been drawn that the cases are probably CCHF cases, four of them having been in contact with each other.

In order to discard possible cases of anthrax, tularemia, ornithosis, influenza (including avian influenza) and babesiosis, serological and virological tests have been carried out on the patients, as well as 19 people in close contact with them. All test results were negative. Additional virological investigations are currently being carried out at the National Centre of Infectious and Parasitic Diseases in Bulgaria. Samples from the patients have been sent to the Institute of Infectious Diseases in Rome, Italy for confirmation of the diagnosis. The results will be delivered by the end of this week.

Conclusions

The outbreak generated intense media and public interest in Bulgaria. A round of consultation meetings with the local population concerned has begun. This allows people working with animals to

have some guidance on how to minimise the likelihood of injury or diseases and to protect themselves from tick bites. At the same time, numerous meetings have been held with general practitioners in the municipality concerned. The respective veterinary authorities also organised massive tick control measures, aiming to protect domestic animals from ticks and tick-borne disease. All the reported cases in this cluster occurred in areas with climate conditions favourable to enhancing the intensive growth of the tick population. Four patients had been exposed to ticks, and two were exposed through blood from a patient.

The team of experts from the Ministry of Health that carried out the investigation also considered the cases from the point of view of the new International Health Regulations. The team were of the view that the cases are neither unusual nor unexpected and there is no risk of international spread. They therefore decided that these cases are not subject of a notification of events that are a public health emergency of international concern. Nevertheless, because of the great media attention and the close proximity to the border with Greece, the Ministry of Health informed the European Region of the World Health Organization and the European Centre for Disease Prevention and Control about the situation and the measures taken, as well as publishing this article in *Eurosurveillance*.

References

1. Monev V, Dikov I, Kamarinchev B. Crimean-Congo-haemorrhagic fever. In *Arbovirus Infections Viral Haemorrhagic fevers and Bio-terrorism*, Sofia 2005, 130-142.

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