

Press Statement

Doctors from the Rotes Kreuz Krankenhaus Bremen publish scientific articles dealing with infectious disease of dog owner in 2018

Bremen 27th of November 2019. Doctors working at the Department of Medicine and the Department of Emergency and Intensive Care Medicine, Rotes Kreuz Krankenhaus, in Bremen published a case report in the “European Journal of Case Reports in Internal Medicine” at the beginning of November 2019. They reported a rare infection caused by *Capnocytophaga Canimorsus*, occurring in a patient from Bremen in 2018. “In a case like this we are obliged to report our findings and procedures for our colleagues by publishing an article in a medical journal as there are very few publications on this topic. “, Dr. Martin Langenbeck, head of the Department of Emergency and Intensive Care Medicine, Rotes Kreuz Krankenhaus, explains. “While treating our patient, we were able to benefit from publications of other colleagues in the same way.”

In 2018, a patient presented with a 3-day history of flu-like symptoms, fever, heavy breathing and skin and mucosal haemorrhages – signs of a severe infection – and was admitted to the Rotes Kreuz Krankenhaus. After being treated with an empirical broad spectrum antibiotic treatment, the patient’s state deteriorated rapidly and he died after 16 days of treatment in intensive care as a result of multiple organ failure. Blood cultures revealed the bacterium *Capnocytophaga Canimorsus*, rarely found and difficult to cultivate. It is physiologically found in the oral cavity of many animals, especially dogs and cats. The patient in Bremen was a dog owner.

The bacterium does not cause any harm to animals. In humans, it can lead to infections but seldom causes death. It is most commonly transmitted via dog bites, but can also be transmitted through a dog lick on skin lesions. An infection can vary from a localized skin infection to severe sepsis (purpura fulminans). “Not every patient infected is severely ill. However, approximately 25% of patients with a severe sepsis die. These patients who have been bitten and infected usually also have a compromised immune system, have had their spleen removed or are suffering from alcohol addiction. Our patient did not have any of these risk factors. A severe course of the disease without any of the risk factors mentioned and without a bite wound, as in our patient’s case, happens very rarely. We assume an earlier clinical admission and antibiotic treatment would have attenuated the further development of his infection”, Dr. Langenbeck says.

Up to now, only one other case has been published in which an immunocompetent patient, who was only licked by his dog, suffered a similarly severe course to the patient in Bremen.

The doctors from the Rotes Kreuz Krankenhaus further published a meta-analysis dealing with all of the case reports published concerning an infection with *Capnocytophaga canimorsus* in immunocompetent patients since 2002. They reviewed 128 cases. Dr. Langenbeck summarizes the recommendations: In the case of an animal bite, consult your physician to clean and treat the wound, in order to minimize bacterial contamination and the risk of a severe septic course of the disease. In case of risk factors or bites of specific parts of the body an antibiotic

treatment is recommended. There are no definite recommendations on a general prophylactic antibiotic treatment after a dog or cat bite.

If you as a pet owner show symptoms going beyond a simple viral infection, seek your physician's advice, even if you have not been bitten or do not suffer from a compromised immune system. The physician can find out whether you have contracted a bacterial infection. In the case of an infection with *Capnocytophaga canimorsus* your doctor can prescribe penicillin in combination with a beta-lactam inhibitor thus preventing further complications.