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Short Research Article

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Prevalence of *Capnocytophaga canimorsus* in the Oral Flora of Healthy Dogs

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Abstract

BACKGROUND: The bacterium *Capnocytophaga canimorsus* is a relatively newly recognized gram-negative, facultative, slow-growing bacillus that forms part of the normal oral flora of dogs and cats. Considering the pathogenicity of this bacterium in humans, determining its prevalence is very important for public health as well as the health of dog owners.

OBJECTIVES: This study aims to investigate the prevalence of *Capnocytophaga canimorsus* in the normal oral flora of healthy dogs.

METHODS: After taking samples from the saliva of 32 healthy dogs without oral, dental or digestive diseases at different ages, breeds, and sexes, they were placed in a test tube containing 10 mL of sterile peptone water with sterile plastic brushes, and immediately sent to the bacteriology laboratory under sterile conditions. The samples were cultured on a chocolate agar medium containing 5 % defibrinated sheep blood. Then, all the samples were kept in a greenhouse for 48 hours at a temperature of 37 °C and under anaerobic conditions. Using a loop, the grown pink colonies were isolated and to confirm the identification of the isolates, polymerase chain reaction (PCR) test was used in three main steps: Gene extraction, PCR reaction, and electrophoresis.

RESULTS: Out of 32 saliva samples, four positive cases of *Capnocytophaga canimorsus* bacteria were identified by PCR diagnostic method.

CONCLUSIONS: Given that *Capnocytophaga canimorsus* bacterium is present in the oral flora of healthy dogs, dog owners should have sufficient and favorable knowledge about this bacterium and related diseases. The PCR method can be used to detect this bacterium.

Keywords: *Capnocytophaga canimorsus*, Dogs, Normal flora, Oral cavity, PCR

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Figure Legends and Table Captions

Figure 1. Plastic and sterile orthodontic brush.
Figure 2. Cultivation of samples by linear method in chocolate agar medium.
Figure 3. Sample preparation steps for PCR.
Figure 4. Placing samples in electrophoresis gel wells.
Figure 5. Formation of a band on bp79 and identification of bacteria (the first well on the left contains the bp50 ladder).
Figure 6. Formation of three bands on bp79 and identification of bacteria (the first well on the left contains the bp50 ladder).
Figure 7. The results of the study.