

Trace and major elements status in bronchoalveolar lavage fluid in dogs with or without bronchopneumonia

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Abstract

The aim of this study was to investigate the relationships between the bronchopneumonia and mean concentrations of those trace elements in bronchoalveolar lavage fluid (BALF). Twenty-nine dogs were included in this study (17 healthy dogs and 12 dogs with respiratory disease). Each BALF sample had been obtained during bronchoscope examination by use of a standardized method. The concentrations of Al, Br, Ca, Cu, Fe, K, Ni, P, Si, Sr and Zn in BALF were measured by the particle-induced X-ray emission method. We found no relationship between the bronchopneumonia and the levels of elements in the BALF, except Ca, P and Zn. The dogs with respiratory disease were found to have a large amount of Ca and Zn, and a high Ca/P and Zn/Cu ratios in BALF compared to those without respiratory disease.

Keywords : Bronchoalveolar lavage fluid, Bronchopneumonia, Dog, Element, Particle induced X-ray emission