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Fine needle aspiration: Osteomyelitis and osteosarcoma in dogs

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Osteosarcoma (OSA) is a primary malign, non-hematopoietic osteogenic tumor with an increased incidence of cases in the last years, which is probably related both with patients' longevity and with the advent of technics that allow more accurate diagnosis. OSA appears spontaneously in the appendicular bone with significant impact both in dogs and in children, being this biological similarity that has made dogs a clinical model for the study of OSA in humans. Unfortunately, the lesion is aggressive and has high metastasis rates regardless of species, affecting, among other organs, the lungs. The survival prognosis is bad in patients with pulmonary metastasis or unresponsive to chemotherapy, making it highly lethal. Traditionally, the therapy consists in amputation, followed by chemotherapy. For humans, chemotherapy, based on a previous histological diagnosis including the degree of aggressiveness, exhibits better survival due to metastasis reduction; however, the conduct is not much explored in Brazil. Osteomyelitis is an inflammation of the bone, bone marrow, endosteum, periosteum and vascular channels, and can be associated with bacterial, fungal and viral diseases. According to the medical condition evolution, osteomyelitis can be classified as chronic or acute, the last being less frequently diagnosed. Chronic osteomyelitis can result from inadequate treatment of acute bone inflammation, which indicates the importance of rapid and accurate diagnosis to better therapeutic conduct of the osteomyelitis being treated. In this study it was verified, by light microscopy, the morphological expression of parameters used for cytological OSA and osteomyelitis diagnosis of 20 different pure and mixed breed dogs, followed by analyzing both possible malignancy criteria. The goal of this project is to demonstrate that the fine-needle aspiration technique is able to carry out efficiently the diagnosis of osteomyelitis as well as canine osteosarcoma.

Biography

Rocha N S was graduated in Veterinary Medicine from the State University of Maranhao (1989), received her Master's degree in Pathology (1994) and PhD in Pathology from the Sao Paulo State University (1998). She is currently an Associate Professor of Sao Paulo State University, Brazil. She has experience in the area of veterinary medicine with emphasis on animal pathology anatomy, acting on the following topics: Veterinary, cytopathology, pathology, cancer and histopathology. She is an Associate Member of the International Academy of Pathology.

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