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Analysis of osteosarcoma canine cells survival after irradiation with cobalt equipment

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Analysis of osteosarcoma canine cells survival after irradiation with cobalt equipment: It is study about osteosarcoma (OSA) cell survival after it was irradiated with different doses of ionizing radiation involving statistical analysis, MTT assay (methylthiazolyldiphenyl-tetrazolium bromide) and dual acridine orange/ethidium bromide (AO/EB) fluorescent staining to detect apoptosis. In this study, the authors wish to demonstrate the efficiency of cobalt therapy using different doses of ionizing irradiation in a cell culture of canine osteosarcoma. Most scrutinized literature was collected from different sources including BMC Veterinary Research. Among the radiotherapy protocols available in the literature for the case of OSA, the most commonly used is the incidence of cobalt-60 in intensity from 8 to 10 Grays (Gy) applied in three sessions. The MTT assay results as a function of mitochondrial activity in living cells. It is observed in the conditions that research was realized; that with MTT assay the cell survival is not that significant difference with 10Gy and 15Gy 24 hours after treatment. The same is observed with 20Gy and 30Gy, however, the survival is very low. The dual AO/EB fluorescent staining allows distinguishing viable cells and cells in different stages of apoptosis. This study confirms that OSA is a radioresistant tumor with a high mean surviving 24 hours after treatment with low doses.

Biography

Noeme Sousa Rocha was graduated in Veterinary Medicine from the State University of Maranhão (1989), completed Masters in Pathology from the Sao Paulo State University (1994) and PhD in Pathology from the Sao Paulo State University (1998). She is currently an Associate Professor of Sao Paulo State University, Brazil and 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 also an Associate Member of the International Academy of Pathology.

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