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Poster

Stereotactic radiotherapy treatment in a dog with appendicular osteosarcoma: a case report

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Abstract

Osteosarcoma accounts for 85% of malignant bone tumors in dogs, and it is almost always fatal, even if diagnosed early. Lameness, reflecting the location of the lesion, is usually the earliest symptom. Surgery, radiotherapy and chemotherapy methods are used in the treatment of osteosarcoma. An advanced treatment technique, stereotactic radiation therapy, is an alternative for dogs who cannot undergo amputation or limb-sparing procedures. Stereotactic radiation therapy involves the delivery of high-dose radiation fractions (20 to 30 Gy) to the target area using an external beam of radiation, sparing surrounding tissues with submillimeter accuracy. The aim of this study is to present the clinical findings, pathological diagnosis and stereotactic radiotherapy results of appendicular osteosarcoma tumor in an eight-year-old female Cane Corso Italian Mastiff dog. In the clinical examination, an eight-year-old female Cane Corso Italian Mastiff breed with lameness, local swelling and pain in the left hind foot, and an X-ray examination performed on a 60 kg dog, revealed osteolysis in the distal left fermur. The surgically obtained biopsy specimen was subjected to tissue follow-up procedures in the pathology laboratory, and the diagnosis of productive type osteosarcoma was made after histopathological evaluation. A 36 Gy stereotactic body radiation therapy protocol was created for the case in 3 fractions. A decrease in local pain and neoplastic swelling was noted within a short time after the radiation therapy sessions ended. At the end of the 6-month follow-up, re-lesion development was observed in the primary tumor area. Chemotherapy sessions were started with a dose of 300mg/m2 carboplatin. Pulmonary metastasis was detected in the clinical oncological follow-up of the patient who survived for approximately 2 years with radiotherapy and chemotherapy. Although the average survival time after diagnosis is 2 months in malignant osteosarcoma cases, the process can take up to 6 months with amputation and chemotherapy. On the other hand, we aim to raise awareness with this presentation that stereotactic radiotherapy applications are a successful method in recent times, as well as having a positive effect on pain management, average survival time and quality of life.

Keywords: histopathology, canine, osteosarcoma, radiotherapy, stereotactic

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