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Treatment of a cat diagnosed with nasal squamous cell carcinoma with stereotactic body radiation case report

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Abstract

Squamous cell carcinoma (SCC) of the nasal planum in cats is a common malignancy that is invasive to the surrounding tissue, has an aggressive course, and has a high recurrence rate. Besides the surgical excision, radiotherapy application is preferred alone or in combination with other treatment methods. In this study, it was aimed to present the clinical oncological approach of a cat diagnosed with SCC in the nasal planum, which achieved a complete remission with stereotactic body radiation therapy (SBRT) after surgical excision. A four-year-old, neutered, male, tabby cat was brought to clinical examination with the complaint of rapid enlargement of the lesion on the nasal planum and surrounding tissues. A biopsy sample taken from the lesioned area was sent to the pathology laboratory. Histopathological examination revealed SCC. Immunohistochemical marking was performed with Cytokeratin, Vimentin, and Ki67 antibodies to determine the differential diagnosis and prognosis. Due to the local aggressiveness of the tumor, the tumoral lesion was removed by excising the deep and wide margin of the tissue, and reconstructive surgery was performed on the area with a tissue flap. Approximately two months after post-operative recovery, planning was made for both metastasis investigation and radiotherapy with the computed tomography imaging method. The case was treated with the principle of SBRT in 3 fractions of 24 Gy in total to the tumoral area. Current treatment methods in cases with SCC are still in the trial phase. The biggest advantage of SBRT compared to traditional radiation therapy protocols is that it takes shorter treatment time, creates less anesthesia time, and shows superior results, especially in anatomically inaccessible tumors. In conclusion, we think that our case, in which complete remission was achieved with SBRT, is an alternative treatment method for cats with a diagnosis of SCC arising on nasal planum.

Keywords: carcinoma, feline, nasal, squamous, stereotactic

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