



Oral Presentation

Evaluation of malignant findings in feline oral squamous cell carcinoma

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Abstract

Feline oral squamous cell carcinoma is the most common oral malignancy in cats with aggressive malignancies and the ability to invade adjacent tissues. A grading system for histopathological examination of FOSCCs and the determination of malignancy criteria need to be developed in veterinary oncology. For this purpose, the archive of the Department of Veterinary Pathology, IUC Veterinary Faculty between the years 2010 and 2020 was reviewed. The cases diagnosed with FOSCC were histopathologically re-evaluated and graded according to the Anneroth grading system. The epithelial origin of the neoplasm was confirmed by the immunohistochemical staining technique using a pan-cytokeratin antibody. In order to evaluate malignancy, cyclooxygenase (COX)-2, epidermal growth factor receptor (EGFR), and Ki-67 markers that play a role in carcinogenesis stages were immunohistochemically labeled. As a result of the histopathological evaluation, 14/25 of the cases were determined as Grade 2 and 11/25 as Grade 3. A positive reaction was observed in 96% of the cases in immunostaining with COX-2 antibody, but no difference in expression was observed between Grades 2 and 3. While the positive reaction was observed in 84% of the cases in immunostaining with EGFR antibody, it was noteworthy that the severity of reaction was lower in Grade 3 tumors. The immunopositivity of Ki-67 was observed as strong nuclear staining and a positive correlation with the mitotic index was noticed in the Anneroth grading system. This correlation was also consistent with the grades of tumors. In conclusion, grading the histopathological findings of FOSCCs was considered an important criterion in determining the malignancy of the tumor. When the immunohistochemical parameters were evaluated, the epithelial origin of the tumor was confirmed with pan-cytokeratin. The relationship between COX-2, EGFR, and Ki-67 and histopathological malignancy criteria laid the groundwork for the development of possibilities that can play an important role in the clinical evaluation and treatment of the patient.

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