

Spontaneous mixed type trichoblastoma in a pet lop rabbit: immunohistochemical application of CK7, CK20 and CD10 in animal trichoblastoma

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Abstract

Trichoblastomas are the most common benign cutaneous tumors in rabbits. Since, these neoplasms have various sub-types; therefore they may be confused with other similar tumors having basaloid epithelial cells constituents. A male five-year-old mixed lop-eared rabbit had a palpable two-lobulated firm and motile oval mass located under the right ear between the mandible and neck measuring 3×1.5×1 cm without ulceration. The general condition of the rabbit was good and there was no fever or abnormality in the leukogram. A grayish-white mass was fixed in 10% buffered formalin after surgical excision. Pathologic observations of Hematoxylin and Eosin, Periodic Acid Schiff and Masson's trichrome stained sections from the mass confirmed a tumor consisting of typical basaloid epithelial cells in both ribbon and trabecular (mixed) features with stromal connective tissue. Moreover, immunolabeling of the tumor was performed by CK AE1/AE3, CK7, CK20, CD10, Vimentin, S100 and Ki67. Based on pathology and immunohistochemistry, a diagnosis of mixed type trichoblastoma was made for the mass. Immunohistochemically, there was a strong CK AE1/AE3 expression (>50% of basaloid tumor cells), strong immunolabelling (>50%) of tumor-associated stromal trabecular connective tissue against vimentin and weak positive immunoreaction (1-10% of tumor stromal cells) against S100. Also, the tumor was confirmed as a weak proliferative by Ki67. On the other hand, the expression of CK7, CK20 and CD10 was 30-40% (moderate), 20-30% (moderate) and <10% (weak) in tumor cells respectively. Accordingly, using CK7, CK20, and CD10 with other markers can be useful in differentiating animal trichoblastoma from similar tumors such as basal cell carcinoma, trichoepithelioma or other tumors that originate from basaloid epithelial cells of hair follicles.

Key words: Rabbit, Trichoblastoma, CK7, CK20, CD10

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