

Dentinogenic ghost cell tumor in a Sumatran Rhinoceros

ABSTRACT

An adult female Sumatran rhinoceros was observed with a swelling in the left infraorbital region in March 2017. The swelling rapidly grew into a mass. A radiograph revealed a cystic radiolucent area in the left maxilla. In June 2017, the rhinoceros was euthanized. At necropsy, the infraorbital mass measured 21 cm × 30 cm. Samples of the infraorbital mass, left parotid gland, and left masseter muscle were collected for histopathology (Hematoxylin & Eosin, Von Kossa, Masson's trichrome, cytokeratin AE1/AE3, EMA, p53, and S-100). Numerous neoplastic epithelial cells showing pleomorphism and infiltration were observed. Islands of dentinoid material containing ghost cells and keratin pearls were observed with the aid of the two special histochemistry stains. Mitotic figures were rarely observed. All the neoplastic odontogenic cells and keratin pearls showed an intense positive stain for cytokeratin AE1/AE3, while some keratin pearls showed mild positive stains for S-100. All samples were negative for p53 and S-100 immunodetection. The mass was diagnosed as a dentinogenic ghost cell tumor.

Keyword: Dentinogenic ghost cell tumor; Odontogenic ghost cell lesion; Sumatran rhinoceros; *Dicerorhinus sumatrensis*; Immunohistochemistry; Special stain