Vascular Hamartoma in the Gingiva of a Calf

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Abstract: A vascular hamartoma is a nonneoplastic malformation that is present at birth and grows until puberty. A one-day-old female native calf due to a tumor-like mass in the gingiva was referred to Department of Pathobiology, Faculty of Veterinary Medicine, Islamic Azad University of Shahrekord. After gross examination of the mass, surgical treatment was performed. Histopathology of the excisional biopsy revealed proliferation of endothelial cells and numerous capillary intermixed with loose connective tissue. The tumor-like mass was diagnosed as gingival vascular hamartoma based on congenitally occurrence, gross and histopathological characteristics.

Key words: Vascular hamartoma, gingiva, birth, calf

INTRODUCTION

Vascular hamartomas are defined as disorganized and excessive proliferations of vascular tissue that are present at birth. They are considered developmental malformations rather than true neoplasms due to their limited growths (Smith and Van Winkle, 2001). Vascular hamartomas have been reported from various species (cattle, pig, horse, goat, cat, dog and human) and observed in various organs or tissues (liver, gingival mucosa, testicle, ovary, skin, muscle, lung and cerebrum) (Benoit et al., 2003).

Gingival vascular hamartoma is a rare tumor-like anomaly in calves and only nine cases of it have been recorded in the literature (Sheshan and Donnelly, 1981; Stanton et al., 1984; Wilson, 1990; Yeruham et al., 2004). In addition to these cases, lobular capillary haemangioma in the gingiva of two 6-month-old calves are described (Van der Gag et al., 1988).

To our knowledge, there is no report about occurrence of gingival vascular hamartoma in Iran. In this case report, we describe gross and histopathological characteristics of this malformation in the affected case.

MATERIALS AND METHODS

A one-day-old female native calf due to a tumor-like mass in the gingiva was referred to Department of Pathobiology, Faculty of Veterinary Medicine, Islamic Azad University of Shahrekord. After gross examination of the mass, surgical treatment was performed. For histopathological study, tissue sample were taken from excisional biopsy. They were fixed in 10% neutral buffered formalin, processed and embedded in paraffin. Sections of 5 μm thickness were cut, stained with haematoxylin and eosin.

RESULTS

At gross examination, a red to brown mass with an ulcerated surface, measuring 2×3 cm, was found in the gingiva near the mandibular incisors. Histopathology of the excisional biopsy revealed proliferation of endothelial cells and numerous capillary intermixed with loose connective tissue (Fig. 1 and 2).

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In this case, macroscopic features of gingival vascular hamartoma were similar to the previous reports. All the recorded cases have been seen in the gingiva near the mandibular incisors (Sheahan and Donnelly, 1981; Stanton et al., 1984; Wilson, 1990; Yeruham et al., 2004).

In this study, the proliferation pattern of endothelial cells was capillary type. This is in agreement with the previous report by Yeruham et al. (2004). In addition to capillary type, cavernous and solid patterns have been recorded in the histological sections of the lesion (Head et al., 2002).

REFERENCES


