

HEMANGIOMA IN A MARE – A CASE REPORT

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ABSTRACT

Hemangiomas are benign tumors originating from the vascular endothelium, common in humans and dogs, but rarely in other animals. In horses, the neoplasms are usually detect on the skin around head and neck, but there is also evidence for affecting of limbs. The affected horses are usually young, suggesting a possible congenital origin of these tumors. There are no evidence for breed predisposition. Histopathologically, hemangiomas are characterized by proliferating, vasoforming mesenchymal tissue forming capillary or cavernous vascular structures. Present clinical case describes the clinical, macroscopic and histopathologic features of congenital hemangioma with unusual topographic location of the ovary at mare.

Key words: congenital hemangioma, ovary, mare, clinical case.

Introduction

Hemangiomas are benign tumors originating from the vascular endothelium, common in humans and dogs (Hargis et al., 1992; Weiss and Goldblum, 2001), but rarely in other animals (Schaffer et al., 2013). In horses, the neoplasms are usually detect on the skin around head and neck (Weiss and Goldblum, 2001), but there is also evidence for affecting of limbs (Johnson et al., 1996). Various terms have been used in the literature to describe these neoplastic lesions: hemangioma, vascular hematoma, vascular nevus, lobular capillary hemangioma and proliferative angioma (Perez-Ecija et al., 2014). Skin tumours are usually single, 6 to 30 cm in diameter, pigmented, hairless, resembling hyperkeratotic plaques. They also occur as nodular formations with ulceration of the skin surface (verrucous hemangiomas). The affected horses are usually young, suggesting a possible congenital origin of these tumors. There are no evidence for breed predisposition (Restrepo et al., 2011).

Histopathologically, hemangiomas are characterized by proliferating, vasoforming mesenchymal tissue forming capillary or cavernous vascular structures (Calonje and Fletcher, 2007). Depending on the size of the vascular spaces hemangiomas are classified into two main categories: capillary and cavernous hemangiomas. Capillary hemangiomas are composed of proliferating vessels with capillary size lined by endothelial cells, often located in the outer layers of the skin. Cavernous hemangiomas are characterized by larger and often ectatic vascular spaces lined by endothelial cells and usually located in the deeper layers of the skin and internal organs (Zafra et al., 2012; Perez-Ecija et al., 2014).

Present clinical case describes the clinical, macroscopic and histopathologic features of congenital hemangioma with unusual topographic location of the ovary at mare.

Materials and methods

The mare's carcass was examined histopathologically according to the standard autopsy protocol. The specimens for histopathological examination of affected internal organs were fixed in 10% neutral formalin and processed routinely. The 4 µm sections were stained with haematoxylin-eosin (Djurov et al., 1989; Dyakov et al., 1989).

Results and discussion

The *gross pathological changes* observed in the external examination of the carcass were characterized by icteric staining of the visible mucous membranes (Fig. 1). After skinning, the subcutaneous tissue around muscles in the thigh and chest wall was yellowish in color, edematous, and streaked with numerous petechial hemorrhages. In opening of the abdominal cavity there was diffuse hyperemia on the surface of the internal organs and about 20 liters of cloudy blood fluid. The liver was brown in color with rounded edges. The kidneys were edematous and soft. The wall of the small and large intestines was edematous and haemorrhagic. The stomach was full of content with hyperemic part of the fundus. The spleen was enlarged and dotted with numerous point-like hemorrhages. In the area of the right uterine ovary, an oval dark red formation, about 25 cm in diameter, with ulcerated and bleeding surface was found (Fig. 2). There were not gross pathology changes in the other organs.



Figure 1: Icterus in oral cavity.

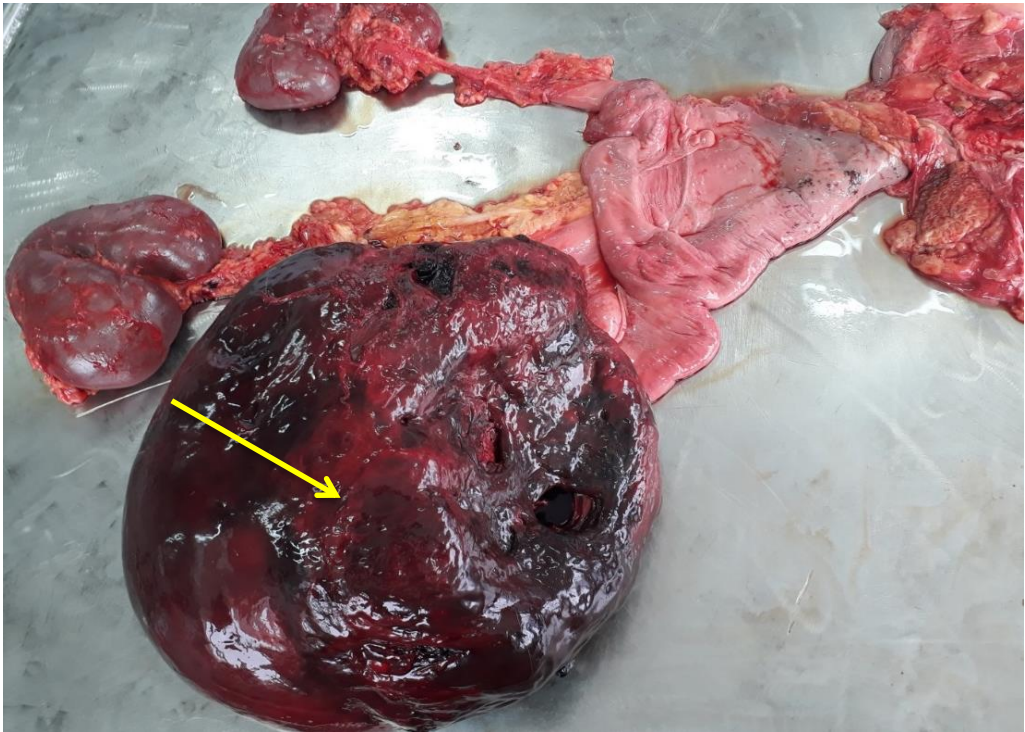


Figure 2: Neoplastic formation in the right uterine ovary (arrow).

Histopathologically, the kidneys exhibited cloudy swelling and granular degeneration. The boundaries between epithelial cells lining the basal membrane of kidney tubules were indistinct. Cell cytoplasm appeared cloudy, and in some cells it had a finely granular pattern. Some epithelial cells were separated from the kidney tubules and were found in tubular lumen. The changes in the liver were more prominent. A high-grade granular degeneration was observed. Hepatocytes were swelled and enlarged, and the boundaries among the cells were not distinct. The cytoplasm was finely granular and irregularly stained. At some sites, in single cells or cell clusters, the degeneration has evolved into necrobiotic processes. As a result, the nuclei of affected cells exhibited a various stage of karyolysis or were completely lysed, and cell boundaries disappeared. Vascular hyperaemia was observed in the connective tissue stroma. There was catarrhal desquamative inflammation, sub-mucosal hyperemia, and edema in the intestine. The parenchyma of investigated neoplastic formation (right uterine ovary) was consisted of endothelial cells, forming numerous blood vessels with different diameters, surrounded by highly developed connective tissue (stroma) (Fig. 3). In some areas an organized thrombi were found with foci of hemosiderosis. In the stroma many lymphocytes admixed with small number of lymphocytes also could be found. The mitotic figures were not found. The pathohistological finding was typical for hemangioma, a benign tumor originating from vascular tissue.

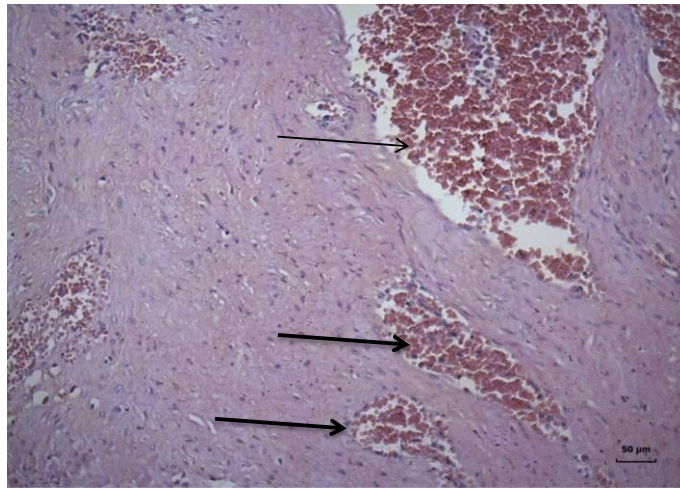


Figure 3: Hemangioma. Blood vessels with different diameter, representing neoplastic parenchyma. Hematoxylin/eosin staining, bar=50µm.

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