

A. Ü. Veteriner Fakültesi Patolojik Anatomi Kürsüsü Başkanı .

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Kürsüsü Başkanı

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CANINE HAEMANGIOPERICYTOMA

(A Case Report)

by

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Özet Üç yaşında, beyaz, erkek, melez bir köpeğin sol glüteus bölgesinden operasyonla çıkarılan, sertçe kıvamlı, gri-boz renkte, damardan fakir, fakat bazı sahalarında küçük kanamalar gösteren bir tümör kütesinin histopatolojik yoklamasında: neoplastik üremenin arteriollerin duvarından kök aldığı, tümörün büyük kısmının fibrosarkoma çok benzeyen sahalardan yapıldığı ve bu kısımlarda yer yer soğan zarları gibi tabakalanmalar, demet, bukle veya düğümömsü şekillerde hücre dizilişleri gösterdiği, arteriollerin duvarında hiyalinizasyon, etrafında ise müsünöz dejenerasyon veya nekroz sahalarının şekillendiği mitotik aktivitesi yüksek bir hemangioperisitom olduğu anlaşılmıştır.

Abstract A grey-colored, firm, lobulated tumor mass, poor in vasculature was excised from the left thigh's gluteal region of a three-year-old, white, male, mongrel dog was histologically examined. Due to the onion-skin arrangement of spindle-shaped ovoid cells, also exhibiting curls or whorls with hyperchromatic nuclei, hyalinization on the arteriolar wall, mucinous degeneration and necrosis of the surrounding tissues, this tumor was classified as Canine haemangiopericytoma. Despite the marked amount of mitosis and its fast growth, no giant cell formation and metastasis was noticed.

Introduction

Haemangiopericytoma is not a frequently encountered tumor in dogs (4, 5, 6, 8) and in cats (5, 7). Only one case was so far seen in our series, and that was a generalized metastatic tumor in a cat (7). Haemangiopericytoma is a soft tissue or mesenchymal tumor, occurring mostly in old dogs' skin and musculature, predo-

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minantly of the thighs and trunk (9). The neoplastic mass may be up to 25 cm. in diameter, greyish-white in color, firm, and lobulated (4, 6, 7, 9). Recurrences after its excision are commonly seen (25 - 50 % of cases) but metastasis is frequent in only necrotic type (9).

Material And Methods

The dog was brought to the Department of Traumatology and Orthopedics for diagnosis and necessary therapy. The case was a three-year-old, white, male, mongrel dog with a round, well encapsulated, firm mass that had a 13 cm. diameter and grown on the left gluteal region of the thigh.

Following the general anesthesia by 2 % solution of Rompun (Bayer, Ger.) the neoplasm was excised (1, 2, 3), and all necessary precautions were taken before and after the surgery.

The excised tumor mass was sliced and fixed in 10 % formalin solution. Tissue samples were embedded in paraffin, and the sections were stained with routine hematoxylin and eosin.

Results And Discussion

With the gross and microscopical characteristics, the tumor was classified as H a e m a n g i o p e r i c y t o m a. Despite the literature (9) the dog was only three-year-old, and was not so old. Neoplastic mass was grey-colored but showing some red spots due to the small haemorrhages. The tumor was well encapsulated, and firm lobulated but poor in blood vessels (*Figure. 1*). The neoplastic proliferation was most probably originated from the pericytes of some arterioles (*Fig.2*). The tumor cells demonstrated onion-skin arrangement that was the most typical feature of a haemangiopericytoma (*Fig. 3*). The fibroblast-like tumor cells with ovoid hyperchromatic nuclei tended to form bundles, curls or whorls in mostly fibrosarcoma-like areas that took the main portion of the mass (*Figs. 3, 4*). The walls of some arterioles were hyalinized (*Fig. 3*), as their surrounding tissues underwent to mucinous degeneration and necrosis (*Fig. 4*). These findings were considered as the principal characteristics of canine haemangiopericytoma (9). In some areas, varied sized haemorrhages were noticed (*Fig. 5*). These haemorrhages may possibly be due to the hyalinization of the arteriolar walls, but were not mentioned in the literature. The main portion of the neoplasm was more or less a fibrosarcoma being composed of fibrocyt-like spindle-shaped ovoid cells going to

different directions (Fig. 6). Contrary to the reported findings, the mitotic activity was noticeably high in this fast growing tumor (9), but neither giant cell formation nor metastasis was detected.

The dog was still alive and in good health conditions with no local growth on the place of surgery, by the last examination, that was three months after the excision of tumor mass.

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Yazı "Dergi Yazı Kurulu"na 19. 4. 1977 günü gelmiştir.

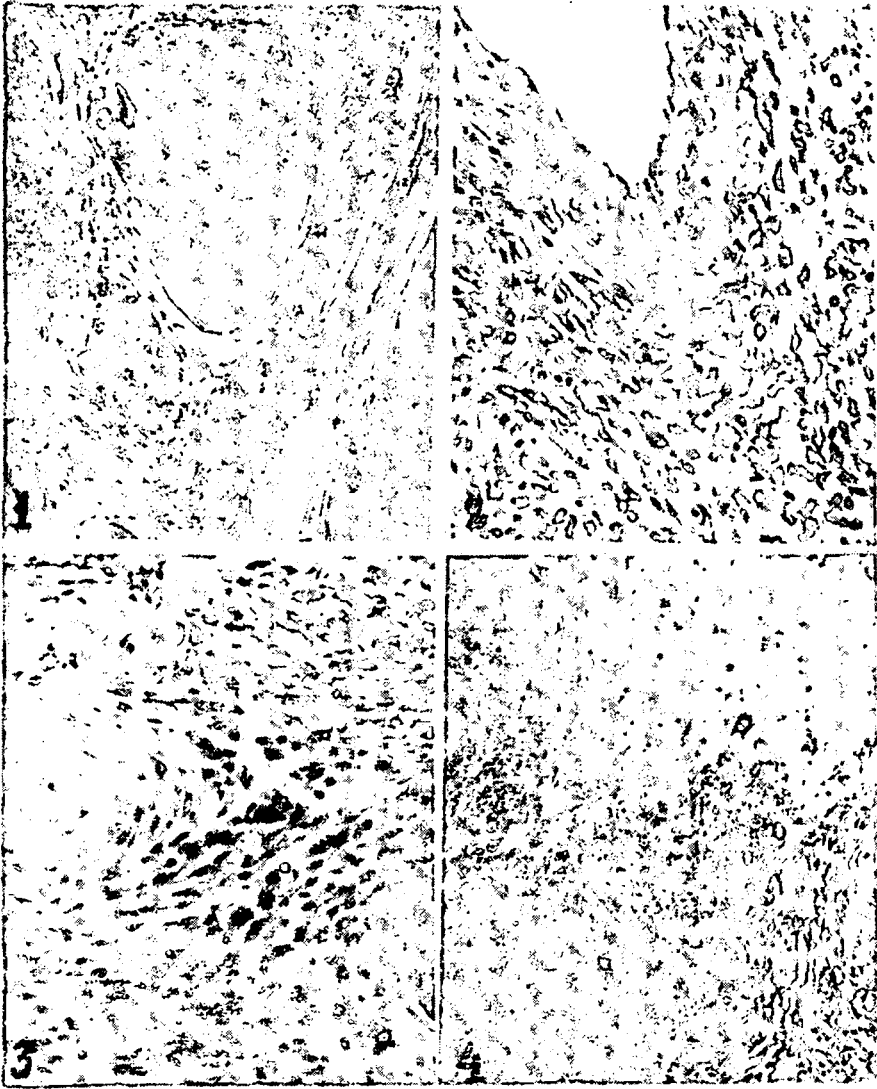


Figure: 1 General view of Haemangiopericytoma that resembles to a fibrosarcoma., Hematoxylin and Eosin Stain (H-E), X 120 (Fibrosarkomu andıran Hemangioperisitom'un genel görünümü)

Figure:2 Origination of neoplastic proliferation from the peripheral cells (Pericytes) of the wall of a small artery, and a marked number of mitotic figures among the spindle-shaped ovoid or fibroblast like tumor cells., H-E., X 400 (Neoplastik üremenin küçük bir arter duvarındaki perisit hücrelerden başlayışı ve alanda iğ şeklindeki fibroblast benzeri hücreler arasında dikkati çekecek sayıda mitotik figürler).

Figure: 3. Onion-skin arrangement of tumor cells around small arteries, and hyalinized wall of the vessels., H-E., X 400. (Küçük arterler etrafında tümör hücrelerinin soğan zarı şeklinde tabakalanmaları ve arter duvarının hyalinizasyonu).

Figure: 4. Mucinous degeneration or necrosis in canine hemangiopericytoma., Bundles, curls and whorls of tumor clls., H-E., X 200 (Köpek hemangioperisitomunda müsinoz dejenerasyon veya nekroz sahası yanında dalgalı demetler ve düğümler yapan tümör hücreleri).

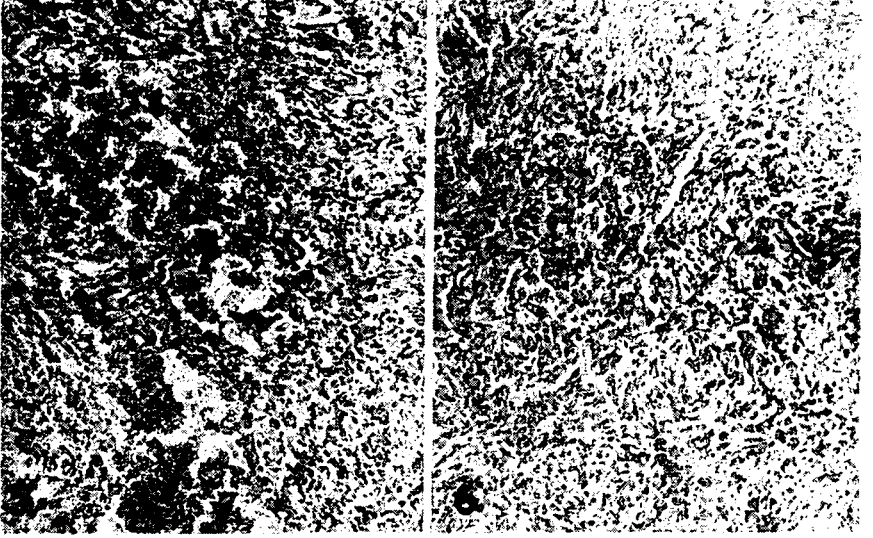


Figure: 5. Haemorrhages in the tumor mass due to the hyalinization of the arterial wall., H-E., X 200 (Arter duvarının hyalinizasyonu sonu kanamalar).

Figure: 6. Fibrosarcoma - like areas of the tumor that consisted of the largest portion., H-E., X 200 (Tümörün en geniş kısımlarını oluşturan ve fibrosarkoma çok benzeyen sahalarının histolojik görünümü).