

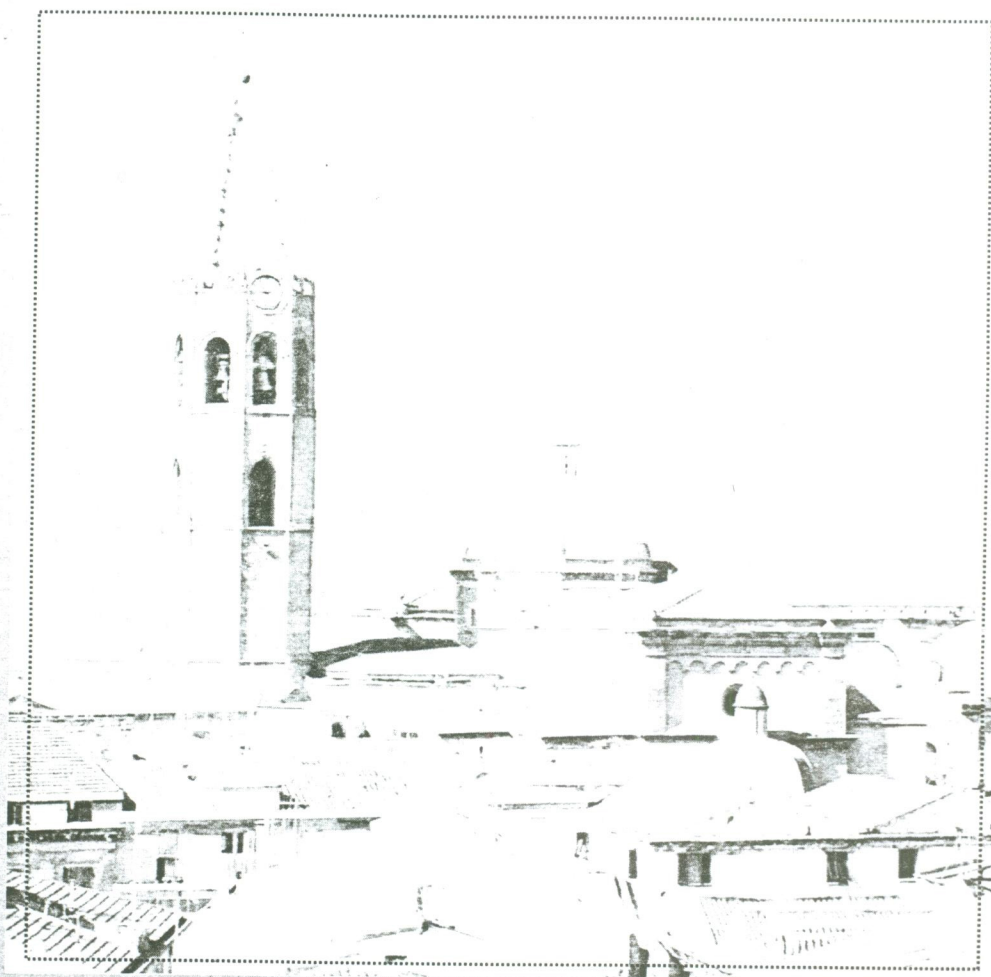


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## A CASE OF ANGIOKERATOMA

H. Vala, F. Esteves<sup>(1)</sup>, A. Alves<sup>(1)</sup>

<sup>(1)</sup> Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal  
<sup>(2)</sup> Serravallo Centro Médico-Veterinário, Vila Real, Portugal

A sample of skin from a male eight years old boxer was submitted to the pathology service. This sample included a small, ovoid, well-circumscribed mass that was elevated above the skin surface, had a blue color and 1 cm in diameter. This nodule was removed from the left anterior member of the dog. No others nodules have been reported until the moment.

The samples were embedded in paraffin, sectioned at 3 mm and stained with a hematoxylin and eosin (HE). For the immunohistochemical study a commercial monoclonal antibody directed against keratin, a commercial monoclonal antibody against vimentin, a commercial polyclonal antibody against type IV collagen and a commercial polyclonal antibody against factor VIII-related antigen were used. This sections were treated with a avidin biotin complex.

The microscopic examination revealed an irregular hyperplasia of the epidermis. The superficial dermis was composed by dilated vascular spaces filled with erythrocytes. Each vascular structure was enclosed and lined by a single layer of cells which resembled normal endothelial cells, aligned on a thin collagenous septa. Epithelial trabeculae extended downward to separate and partially surround some of the vascular structures.

Immunohistochemically, as expected, the epithelial component revealed reactivity for keratin and the vascular proliferations revealed reactivity to vimentin, type IV collagen and the endothelial cells revealed reactivity to factor VIII-related antigen. The histologic characteristics were similar to those of the hemangiomas but the presence of this unusual marked hyperplasia of the overlying epidermis, which appeared to invade among the vascular spaces of the superficial dermis, showed that an angiokeratoma was present.

To conclude, the mass observed had both components, vascular and epithelial, which permitted us to conclude that we were in the presence of the rare subtype of hemangioma - the angiokeratoma.

## A CASE OF A MULTICENTRIC UNDIFFERENTIATED BRONCHIOLO-ALVEOLAR ADENOCARCINOMA IN AN AUTOCHTHONOUS COW

A. Alves, M. Pinto, P. Ribeiro, H. Vala

Universidade de Trás-os-Montes e Alto Douro, Vila Real, Portugal.

The rarity of primary pulmonary tumours in domestic animals is in contrast to their frequency in humans. Primary lung neoplasms are rare in cattle but adenoma and adenocarcinoma are seen as incidental findings at slaughter. Macroscopically the pulmonary lesions of the adenocarcinomas can mimic the caseous lesions frequently seen in tuberculosis.

A 5-year-old cow of an autochthonous breed (Barrosa) that arrived to a local slaughterhouse had many round, oval or irregular, white-yellow, subpleural firm masses. The veterinary meat inspector suspected of tuberculosis, all viscera and other parts of the carcass were inspected for similar lesions. No other gross lesions were found. Tissues were fixed, processed routinely, and stained with H-E, Van Gieson stain, cytokeratins (5,6, 8,17 and 19), vimentin and S-100 protein. The immunohistochemical staining was performed using a streptavidin-biotin-immunoperoxidase method.

Macroscopically multiple round, oval or irregular white-yellow, subpleural nodules were observed in the right lung, scattered throughout the lung parenchyma, that on cut surface had necrotic centers. These nodules were 1,5 - 5 cm in diameter.

The histological appearance consisted of irregular, poorly formed glands of various sizes and shapes that resembled immature bronchioles and alveoli. Irregular papillary growth was also observed. The neoplastic cells were irregular in size and shape and lacked nuclear polarity, had large, open-faced nuclei, prominent nucleoli, and common mitotic figures.

Stromal fibrosis, often diffuse, was always accompanied by stromal invasion of carcinoma cells. Invasion was also seen in local lymphatics. Zones of necrosis consisted of mixed inflammatory cells and a few giant cells. The neoplastic tissue was often surrounded by lymphocytes and plasma cells. Detachment of neoplastic cells into gland lumens was a common feature; some lumens were nearly filled with these cells.

The cytokeratin revealed moderated staining of neoplastic cells, in contrast to the strong staining of normal epithelium. A positive reaction to vimentin was only seen in stromal cells; neoplastic cells were negative. Some of the stromal chronic inflammatory cells were S-100 protein positive.

Based on gross, microscopic and immunohistochemical characteristics, the diagnosis was primary undifferentiated bronchiolo-alveolar adenocarcinoma.