

A Case of Liposarcoma in the Lung of a Dog

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A fifteen-year-old female mongrel dog was referred to a local animal clinic with signs of dyspnea. Radiographic examination revealed multiple nodules in the lung. The following day, the animal died and a routine necropsy was performed. Gross examination showed multiple nodular masses of varying sizes in the lung. Microscopic examination of these nodules showed that the tumors were composed of round to polygonal cells. Little or no collagenous stroma was noted. Most of the cells resembled adipose cells with clear single fat vacuole and a peripheral nucleus. Classical signet ring appearance of adipose cells was also observed in some cells. The other cells had variably sized round to oval nuclei and abundant cytoplasm containing variably sized lipid droplets. Immunohistochemical evaluation was performed by the streptavidin-biotin-peroxidase complex method using the following antibodies: anti-S-100 protein, anti-cytokeratin, anti-actin, anti-desmin, anti-vimentin, anti-EMA and anti-CD 68. All of the said tests yielded negative results except for a positive result for S-100. Liposarcoma should be differentiated from other pleomorphic soft tissue sarcoma such as malignant fibrous histiocytoma (MFH) and myxosarcoma. Because of the above-mentioned findings we considered this case as liposarcoma. We classified this tumor as the well-differentiated variant because of the classical typical form of lipoblastic cells. The other variants are the anaplastic or pleomorphic variant and the myxoid variant. Liposarcoma is an uncommon neoplasm in domestic animals affecting mostly dogs. Metastasis is rare affecting the lung, liver or bone.

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