

Primary Pulmonary Adenocarcinoma with Cerebellar Metastasis in a Miniature Pincher

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Introduction

Primary canine lung tumor is very uncommon and account for only about 1% of all cancers diagnosed[1]. The average age at diagnosis is about 10 years and no breed or sex predilection has been confirmed. Almost all primary cancers of the lungs are carcinomas, the most common being adenocarcinoma. This study describes primary lung tumor in a dog that is accompanied by cerebellar metastasis with related neurologic signs.

Materials and Methods

A 13-year-old female Miniature Pincher was euthanized after suffering from continuously growing mass at the right mammary gland area.

Results

At necropsy, a firm tan mass approximately 4 to 5 cm in diameter was noted at the caudal lung lobes. Similar looking nodules were also present in the mediastinal lymph node and pancreas. On cross section of the cerebellum, a single compressive mass was noted between the cerebellum and pons. Histologically, the neoplastic masses consisted of cuboidal shape epithelial cells that form glandular structure. The neoplastic cells have hyperchromatic nuclei with prominent nucleolus and moderate amount of cytoplasm. The degree of mitosis was high. Multiple areas of necrosis, hemorrhage, and tumor emboli were also noted. Metastasis to the mediastinal lymph nodes, pancreas, and cerebellum was confirmed. Based on the gross and histopathologic examinations, a diagnosis of primary metastatic pulmonary adenocarcinoma was made. Clinically recognized neurological signs were therefore due to brain metastasis.

Discussion

Metastasis can occur through hematogenously, trans-

pleurally, airways, or by lymphatics[1]. For some reason, lung cancers in both humans and animals appear to have a propensity to metastasize to the central nervous system [2-4]. Paraneoplastic syndrome, commonly recognized in humans, are rare or unrecognized in animals[2]. This particular case also was euthanized because of unresponsive neurologic sign. On necropsy and histopathology, cerebellar metastasis was noted.

References

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