were polygonal shape arranged in nests, packets, and cords of epithelial cells often forming glandular structures, supported by fibrovascular stroma. Cytomorphology contained distinct cell borders and finely granular eosinophilic cytoplasm. Initial diagnosis was neuroendocrine tumor.

Further IHC diagnosis was done, neoplastic cells revealed strong intracytoplasmic expression of synap-

tophysin and NSE. Immunoreactivity to others was negative.

STATEMENT (CONCLUSIONS)

Based on all findings, intra-abdominal extra-adrenal paraganglioma was diagnosed. Although this tumor is rare in dogs, it should be included in the list of differential diagnosis.

Neoplastic Pericardial Effusion and Widespread Intrathoracic Metastasis in a Dog with a High-Grade Cutaneous Mast Cell Tumour: First Description

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OBJECTIVES

To present the first case report of a neoplastic pericardial effusion, and widespread intrathoracic metastasis, secondary to a high-grade cutaneous mast cell tumour in a dog.

METHODS

An 8-year-old neutered male French Bulldog was presented with a two-day history of intermittent vomiting, reduced appetite, and recent rapid development of multiple cutaneous masses over the head and neck region. Mild tachypnoea and dyspnoea were evident on presentation.

RESULTS

A moderate volume pericardial and bilateral pleural effusion was confirmed ultrasonographically. Echocardiography demonstrated irregular, heterogeneous thickening of the right ventricular and right atrial free walls, consistent with infiltrative intramyocardial disease. Fine needle aspirates and cytology of one of the cutaneous masses confirmed a mast cell tumour. Pericardial fluid cytology was consistent with a haemorrhagic neoplastic effusion due to mast cell neoplasia.

Histopathology and immunohistochemistry of tissues obtained post-mortem confirmed a high-grade cutaneous mast cell tumour with metastasis to the heart, pericardium, mediastinum, and spleen. No metastatic disease was detected in the submandibular lymph nodes and liver. Immunohistochemical analysis yielded a KIT staining-pattern 2, strong and high Ki67 nuclear labelling (average of 65 cells/grid), and an average of 3 positive AgNORs/nucleus in neoplastic cells. PCR for the activating mutation in exons 8 and 11 of c-kit were negative.

STATEMENT (CONCLUSIONS)

To the authors' knowledge, this is the first report describing a high-grade cutaneous mast cell tumour with widespread intra-thoracic metastasis and neoplastic pericardial mast cell effusion in a dog.