

Pulmonary adenocarcinoma in a Gaddi dog

Dhruv Thakur^{1*}, S.P. Tyagi², Adarsh Kumar³, R.D. Patil⁴, Kapil Sharma¹, Deepti Bodh⁴, Deepti Sharma⁴ and Amit Kumar⁴

CSK Himachal Pradesh Krishi Vishwavidyalaya, Palampur-176 062 (Himachal Pradesh)

¹MVSc scholar, ²Professor and Head, ³Professor, ⁴Assistant Professor, Department of Veterinary Surgery and Radiology, Dr. G.C. Negi College of Veterinary and Animal Sciences, Palampur.

DOI No.: 10.5958/0973-9726.2026.00027.5

Accepted: Feb. 2026

Primary lung tumours are uncommon in dogs. The overall frequency of primary lung tumours identified during postmortem examinations in dogs is reported to be 1.24% (Moulton, 1978). The present paper reports a case of primary pulmonary adenocarcinoma in a dog.

A 13-yr-old intact male Gaddi dog was presented with a history of inappetence and weight loss for the past three months, along with haemoptysis and vomiting for the past two weeks. Clinical and haematological examinations revealed frequent coughing, open-mouth breathing, and severe leucocytosis. Blood biochemical parameters were within the normal reference range.

Severe pleural effusion along with a lung mass was suspected during the evaluation of thoracic radiographs. Substantial masking of the cardiac silhouette was observed on lateral thoracic radiographs, whereas on the ventro-dorsal (VD) view, the masking was limited to the left side. A distinct abnormal soft tissue density was observed in the left caudal lung lobe on the VD view of the thorax (Fig. 1).

Thoracic ultrasonography revealed a substantial amount of abnormal anechoic content within the pleural cavity, along with a large space-occupying lesion of heterogeneous echogenicity in the left caudal lung lobe. Ultrasound-guided thoracocentesis from the 7th left intercostal space was performed, and about 1 litre of serosanguinous fluid was aspirated. Cytological examination of the aspirate revealed groups of neoplastic cells with abundant neutrophils admixed with bacterial colonies.

A follow-up radiograph after thoracocentesis revealed a large mass with well-defined margins in the left lung lobe. Considering the poor clinical condition, age of the patient, prognosis, and the owner's reluctance for any surgical intervention, the dog was euthanized after a few days, and a postmortem examination was conducted, which revealed haemothorax and a tumour mass in the left caudal lung lobe. A well-demarcated tumour was also observed in the liver. Histopathological examination of the tumour confirmed primary pulmonary adenocarcinoma, the subtype of which was identified as papillary adenocarcinoma (Fig. 2).

Adenocarcinomas are by far the most common type of primary lung tumour in dogs, and among their

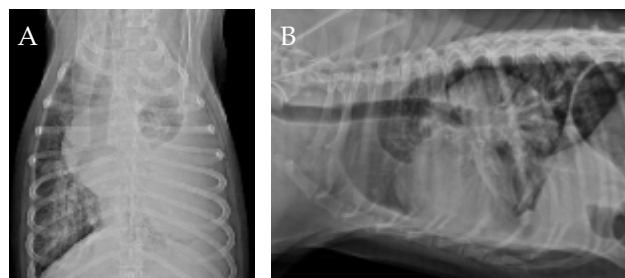


Fig. 1: A: Masking of cardiac silhouette of left lung in VD view of thorax; B: Large mass density with well-defined margins in right lateral view.

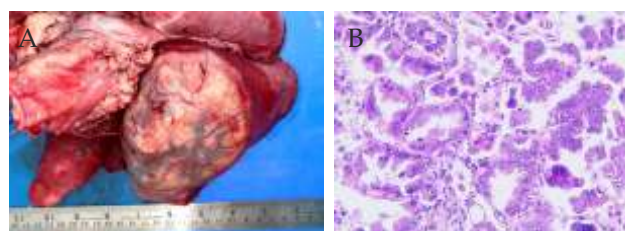


Fig. 2: Postmortem and histopathological findings: (A) a large tumour in the left caudal lung lobe; and (B) histopathology showing the arrangement of neoplastic cells in a glandular pattern with papillary projections into the lumen.

subtypes, papillary adenocarcinoma predominates (Barr *et al.*, 1986). Although dogs with pulmonary adenocarcinomas are reported to have a longer survival time than those with other types of pulmonary carcinoma following surgical resection of the tumour (Miles, 1988), in the present case, the decision was made to euthanize the dog due to multiple factors.

References

- Barr, F.J., Gibbs, C. and Brown, P.J. 1986. The radiological features of primary lung tumours in the dog: a review of thirty-six cases. *J. Small Anim. Pract.* **27**: 493-505.
- Miles, K.G. 1988. A review of primary lung tumours in the dog and cat. *Vet. Radiol. Ultrasound* **29**: 122-128.
- Moulton, J.E., Tscharmer, C. von and Schneider, R. 1981. Classification of lung carcinomas in the dog and cat. *Vet. Pathol.* **18**: 513-528.

*Corresponding author; E-mail: tdhruv18@gmail.com