



Diagnostic Exercise

From The Davis-Thompson Foundation*

Case #: 74 Month: November Year: 2016

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Clinical History: An adult, female La Mancha goat in good nutritional status was submitted alive for necropsy. The animal arrived in sternal recumbency, unable to stand or walk, and with severe respiratory distress. Out of a herd of 800 goats, 2 were sick and had died. The owner had treated the animals for chronic pneumonia with Tulathromycin and Flunixin with no results.

Diagnosis: Diffuse interstitial pneumonia, lymphocytic, moderate to severe, with type II pneumocyte hyperplasia and abundant intra-alveolar eosinophilic proteinaceous material.

Cause: Caprine Arthritis and Encephalitis virus, lentivirus, Retrovirus (this case was positive serologically and in lung by IHC – Fig. 3).

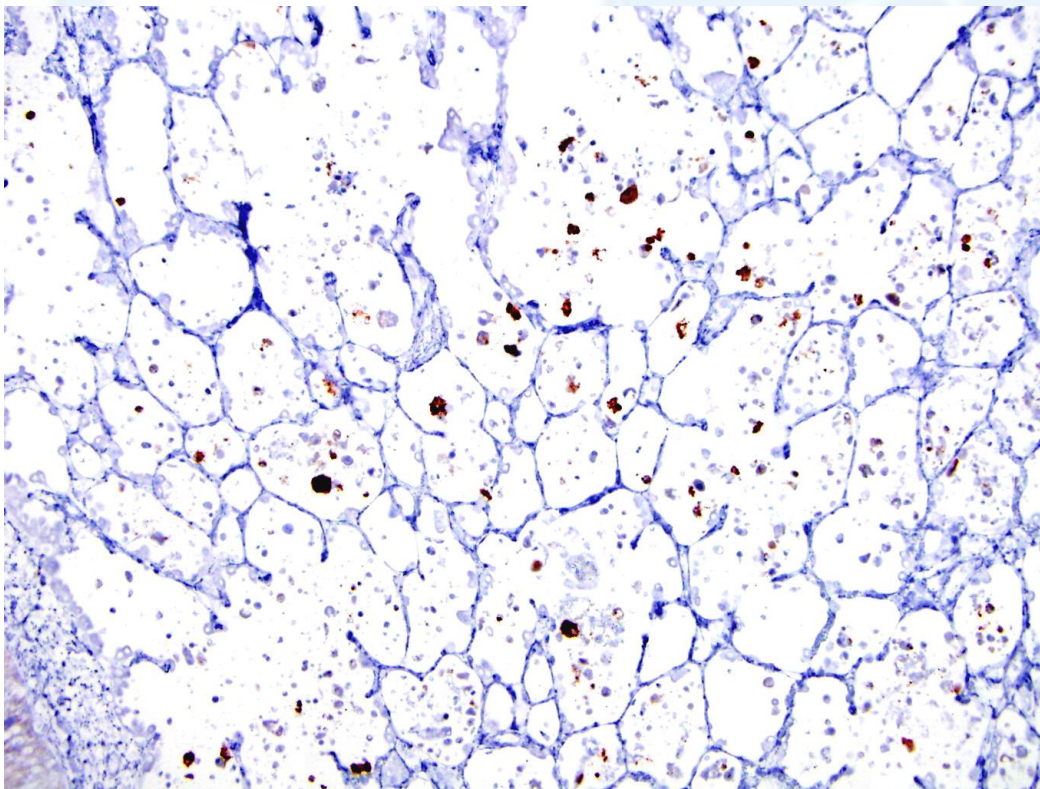


Fig. 3 – Lung, goat. Numerous alveolar macrophages are immunopositive (golden-brown) for Caprine Arthritis and Encephalitis virus. DAB/Hematoxylin-counterstained, 20x objective.

Typical Gross Findings: The lungs do not collapse when the thorax is opened. They are abnormally firm, heavy, and with mottled gray and brown areas of consolidation.

Typical Microscopic Findings: Diffusely, the alveolar septa are moderately expanded with lymphocytic infiltrates and type II pneumocyte hyperplasia. Multifocally, the alveolar spaces are filled with variably eosinophilic, homogeneous, proteinaceous material with small amounts of cellular debris and moderate numbers of neutrophils and foamy macrophages. There are occasional aggregates of lymphocytes and plasma cells.

Discussion: Caprine arthritis and encephalitis (CAE) virus is one of the small ruminant lentiviruses (family Retroviridae) that also cause ovine progressive pneumonia and maedi-visna. Goats with CAE can develop one or more lesions of arthritis, encephalitis and pneumonia. Typically, adult goats develop arthritis resulting in lameness and swelling of carpal or tarsal joints. Young animals, 2 to 4 months of age, are more prone to develop encephalitis leading to neurological disease, characterized by progressive ataxia and weakness. Pneumonia may occasionally be the major presenting form; it can occur at any age and might be accompanied or not with arthritis or neurologic disease.

References and Recommended Literature:

1. Jubb, Kennedy & Palmer's Pathology of Domestic Animals, 6th Edition, Volume 2, pages 558 and 559.
2. Zachary & McGavin's Pathological Basis of Veterinary Disease, 5th Edition, pages 517 and 518.

*The Diagnostic Exercises are an initiative of the **Latin Comparative Pathology Group (LCPG)**, the Latin American subdivision of The Davis-Thompson Foundation. These exercises are contributed by members and non-members from any country of residence. Consider submitting an exercise! A final document containing this material with answers and a brief discussion will be posted on the CL Davis website (http://www.cldavis.org/diagnostic_exercises.html).

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