



Diagnostic Exercise

From The Davis-Thompson Foundation*

Case #: 143 Month: April Year: 2020

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Clinical History: This 7-month-old puppy had a history of neurologic signs of one month duration. The dog presented with bilateral blindness and clinical alterations suggestive of brainstem and spinal cord disease (clinical signs not specified by the clinician). On physical exam, the puppy was in poor body condition and had severe pain on epaxial palpation of the entire spine. The animal was kept at the hospital for further evaluation but died before any additional exam could be performed. A complete necropsy was performed.

Necropsy Findings: The dog was in poor body condition. The ocular and oral mucous membranes were moderately pale. The abdominal and thoracic organs were unremarkable. The leptomeninges of the brain were severely congested and the leptomeninges of the spinal cord had multiple small (0.1 to 0.5 cm), white to gray, slightly raised nodules (Fig. 1). The cut surfaces of the brain and spinal cord were unremarkable on gross examination.

Histopathologic Findings: Numerous microorganisms were observed multifocally in the brain and spinal cord meninges, accompanied by mild to moderate histiocytic and lymphoplasmacytic inflammation (Fig. 2). Occasionally, these microorganisms formed aggregates on the external surface of the meninges that corresponded to the small nodules observed grossly on the spinal cord. Similar microorganisms were also seen in several spinal nerve roots at all levels of the spinal cord (Fig. 3).

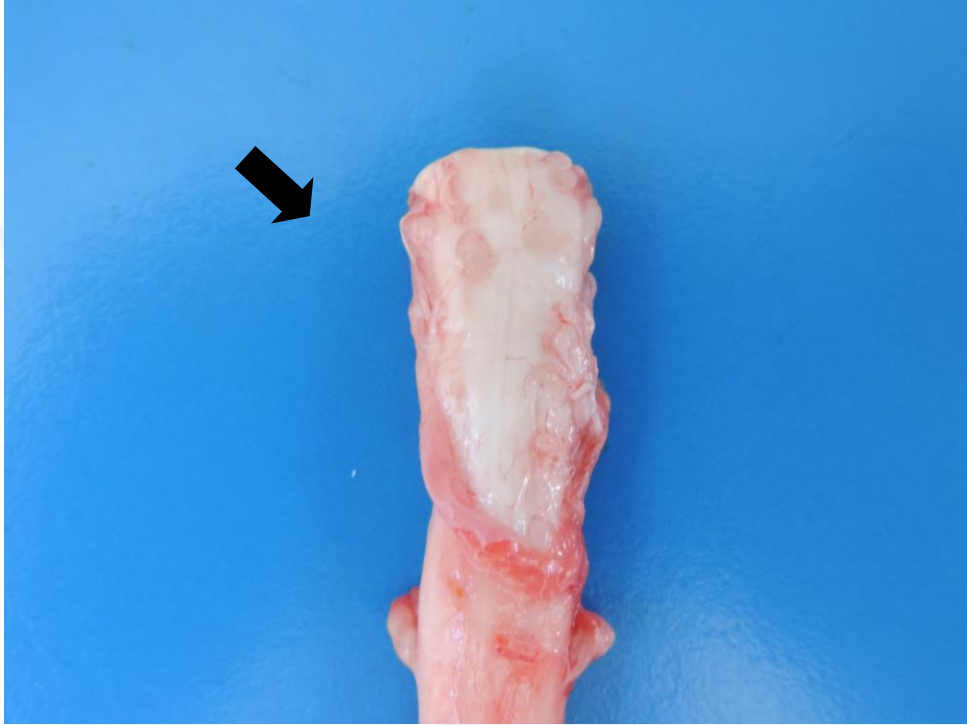


Figure 1

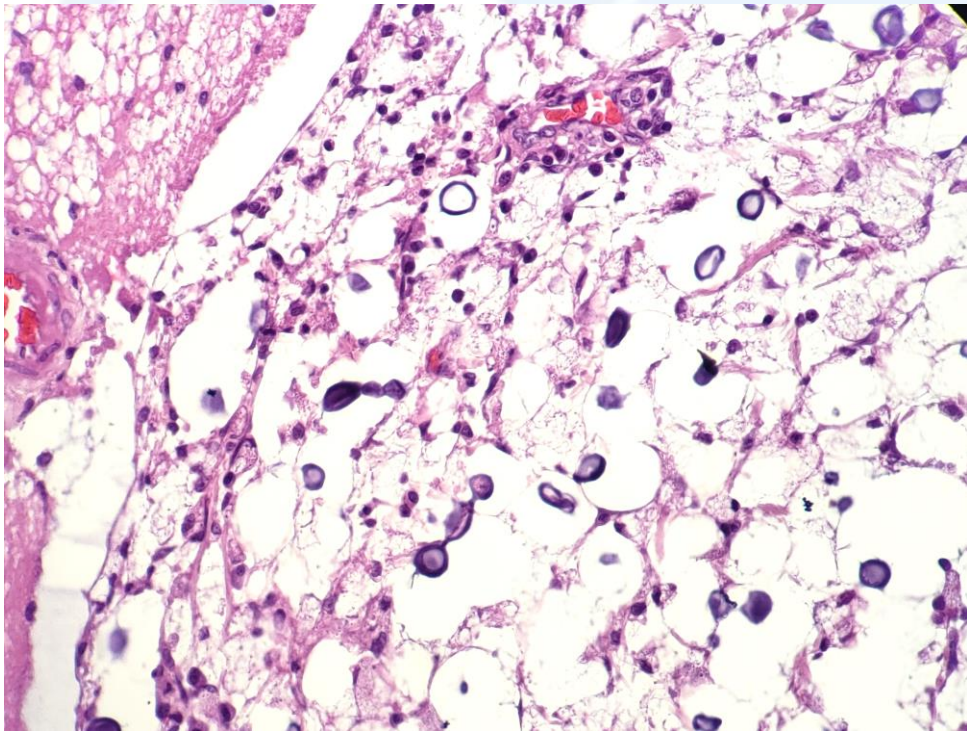


Figure 2

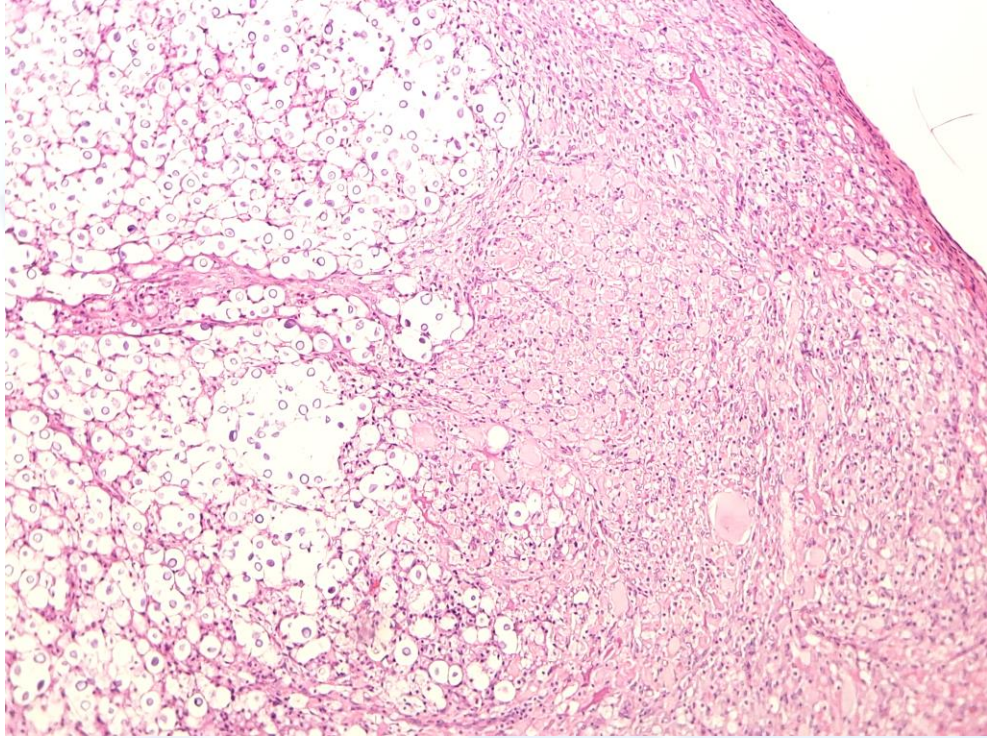


Figure 3

Follow-up questions:

1. What is the morphologic diagnosis?
2. What is the most likely etiology?
3. What is the description of the intralesional microorganism?
4. What special stain(s) can help further characterize this microorganism?

*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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