Case #AP10-01729

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History

• 9 year-old, female spayed, Pomeranian dog
  – 2 week history of right-sided head tilt & progressive dullness
  – Neurolocalization ‡ central vestibular disease
  – MRI ‡ presumptive meningoencephalitis and left otitis media

• No response to steroid and antibiotic tx ‡ arrested
IHC Antibody: CD 3
Morphological Diagnoses

- Brain: intravascular lymphoma with secondary thrombosis and infarction
- Brain: multifocal, moderate lymphoplasmacytic and histiocytic meningoencephalitis
Intravascular Lymphoma (IVL)

- AKA angioendotheliomatosis
  - Intravascular lymphocyte proliferation w/o 1° extravascular mass or leukemia
  - Reported in humans, dogs, 2 cats, and a horse
  - Commonly results in thrombosis and infarction due to location

- In dogs:
  - Primarily in middle-aged, large breed dogs
  - Most commonly seen in the CNS ≠ clinical signs of CNS dysfunction
  - Usually of T-lymphocyte origin

- Ddx: Stage V lymphoma & leukemia
  - Absence of neoplastic cells in blood smears
  - Lack of a primary extravascular mass
  - Absence of bone marrow involvement
Intravascular Lymphoma

• CBC & chemistry findings are non-specific
  – In this case, neoplastic cells were not found in blood smears, BM aspirates, or CSF

• Diagnosis is usually made postmortem
  – 1 report of an antemortem diagnosis achieved by CT guided biopsy of a brain lesion

• Unknown why the neoplastic cells are retained in the vasculature
  – Human study showed an absence of the adhesion molecules CD11a/CD18 or CD29
Questions?

• Thank you!
  – Dr. Keith Linder
  – Sandra Horton & the NCSU-CVM Histopathology Laboratory
  – Resident mates and senior pathologists
References


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