Granulomatous meningoencephalitis

Case 57
Slide 14-129187

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History and signalment

2-year-old male Boston terrier

- Increased frequency of cluster seizures
- Decreased to absent menace response
- Decreased pupillary light response (right side)
- Miosis (right eye)

- Treatment: Levetiracetam and midazolam
Histopathological findings
Histopathological findings
Histopathological findings
- Immunohistochemistry for *T. gondii*, *N. caninum* and *Sarcocystis* spp. was negative.
- Special stains were negative for bacteria and fungi.
Morphologic Diagnosis:

Brain:
Encephalitis, lymphohistiocytic, multifocal to coalescing, severe with meningitis, lymphocytic, multifocal, mild.
Granulomatous meningoencephalitis

- Idiopathic CNS disorder
- Occurs most commonly in small toy breed dogs
- Distribution of lesions:
  - Cerebellum
  - Brainstem
  - Spinal cord
  - Leptomeninges
Granulomatous meningoencephalitis

- **Histology lesions:**
  - Angiocentric or nodular granulomatous lesions
    - Lymphocytes
    - Plasma cells
    - Macrophages
    - Neutrophils

- **Classification based on the site and distribution of lesions:**
  - Disseminated
  - Focal
  - Ocular
Granulomatous meningoencephalitis

- **Pathogenesis:**
  - Uncertain
  - Autoimmunity
    - CD3+ T cells
      - Delayed-type hypersensitivity
  - CNS infection:
    - Viruses (Borna virus, WNV, CPI, EMC)
    - Bacteria (*Bartonella*)
    - *Mycoplasma*
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References


