Case 10
Diagnostic Slide Session, 2015
American Association of Neuropathologists

Amanda O. Fisher-Hubbard, M.D., Sandra Camelo-Piragua, M.D.,
Paul McKeever, M.D., Ph.D.
Clinical History

• 62-year-old man with CAD and HTN presented with 2 week history of decreased appetite, neck/back pain, nausea, vomiting

• Admitted to an outside hospital 1/8/2014

• Suffered tonic-clonic seizure, intubated
MRI, Outside Hospital
T1-weighted, post-contrast
Laboratory Work-up

• **Lumbar puncture**
  Protein: 539 mg/dL
  normal = 15–45 mg/dL
  Gram stain/culture: Negative

• **Urine Histoplasma Ag**
  – Positive
  – Negative on repeat

• **ACE, CSF**
  6.4 U/L
  normal = 0.0 – 2.5 U/L

• **Negative tests**
  Blastomyces Ag (CSF)
  Brucella Ab
  CMV, EBV, JCV, VZV PCR (CSF)
  Enterovirus PCR (CSF)
  Fungal serology (CSF)
  HIV-1 PCR
  Leptospira Ab
  Lyme (CSF serology)
  Q Fever
  Mycobacterium TB PCR (CSF)
  VDRL (CSF)
  Paraneoplastic autoAb (CSF)
Biopsy
2/11/2014
Biopsy Discussion

• Differential diagnosis?

• Stains?
Differential Diagnosis

• Meningioangiomatosis

• Vasocentric/perivascular process
  – Neoplastic
  – Non-neoplastic
Other Stains

- Negative
  - CD20
  - CD1a
  - S100
  - Iron
  - Tissue Gram stain
  - GMS
  - Fite
  - Spirochete
Obliterative microvascular disease with small necrotic foci within brain parenchyma.

Tissue was sent for universal polymerase chain reaction analysis for bacteria, fungi, and mycobacteria (nontuberculous and tuberculosis); all testing was negative.
Our Differential Diagnosis

- Meningioangiomatosis
- Rheumatoid meningitis
- Sarcoidosis
- IgG4-related meningeal disease
GFAP

Ki67

Vimentin

Negative:
CD20
CD1a
IgG, IgG4
S100
Desmin
Tyrosinase
Tissue Gram stain
GMS
Fite
Spirochete
Our Differential Diagnosis

- Meningioangiomatosis
- Rheumatoid meningitis
- Sarcoidosis
- IgG4-related meningeal disease
- Progressive leptomeningeal fibrosis
Progressive Leptomeningeal Fibrosis

- Case report (Chalif D et al., JNN Psych, 1983)
  41-year-old woman with 20 years of facial pain
  Presented with signs/symptoms of increased ICP
  Craniotomy: thick, fibrous leptomeninges
The gross and histological findings are consistent with a **chronic-active proliferative process**. This process is felt to be **neither infectious nor neoplastic**. The histologic pattern is **nonspecific**, but is suggestive of **progressive leptomeningeal fibrosis**.
Summary

• Sampling

• We are open to suggestions!


