History: April, 2016
Porcine, 11-weeks-old. Respiratory and CNS signs were reported. Clinical signs included decrease of water and feed consumption, compromised ambulation with ataxia, incoordination, mental dullness, paresis, paralysis and decreased response to environmental stimuli.

Histopathology:
(A), (B), (C), (D)
Cerebrum, cerebellum and brain stem were examined. Lesions observed were primarily observed within cerebellum and brain stem. Virchow-Robin spaces are often infiltrated and expanded by high numbers of lymphocytes, plasma cells and few macrophages. Additionally, neuropil is multifocally disrupted by variably sized areas of necrosis and gliosis. Admixed with necrotic debris are few neutrophils, lymphocytes, reactive astrocytes and deep eosinophilic and shrunken neurons (degeneration).

Figure 1.

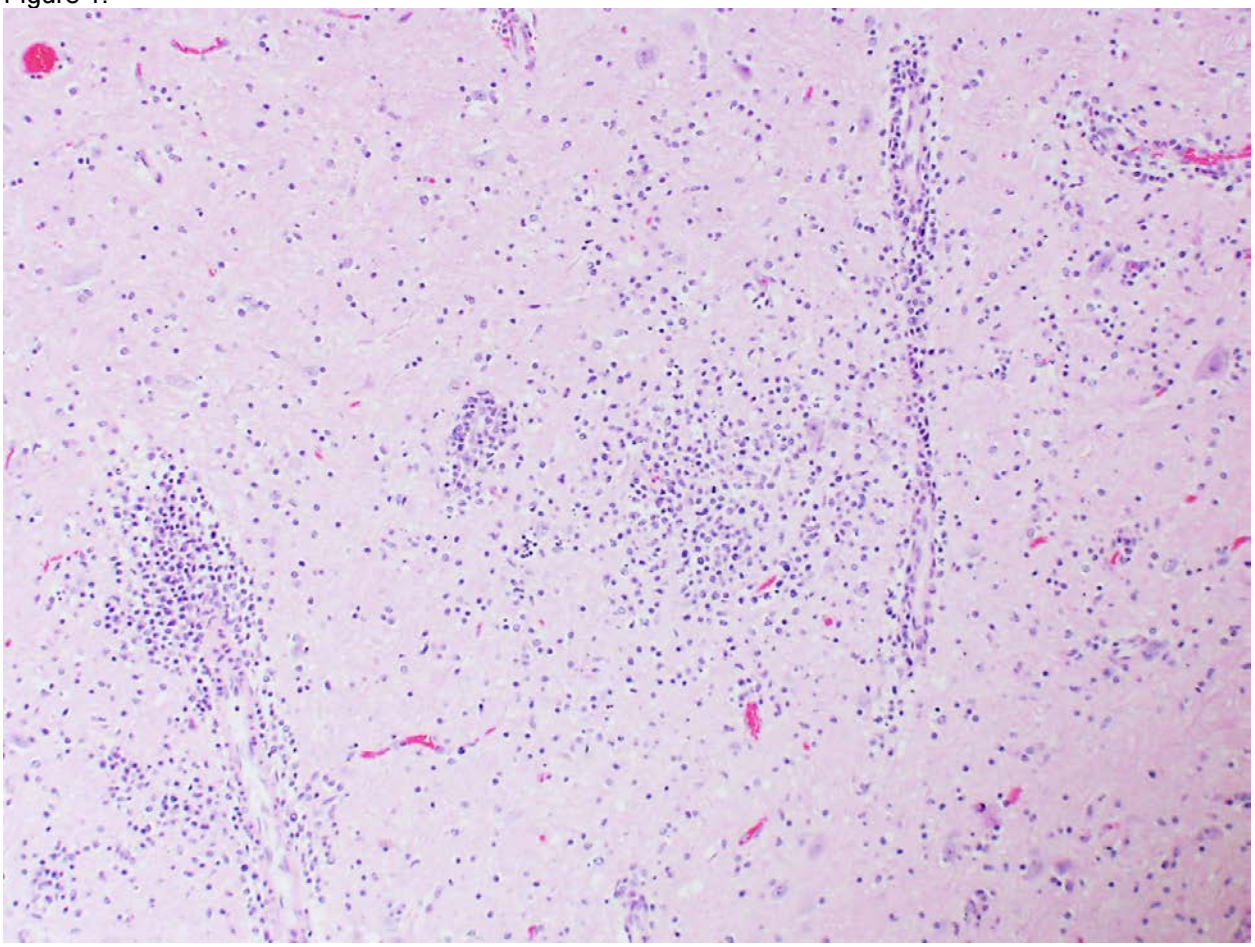


Figure 2.

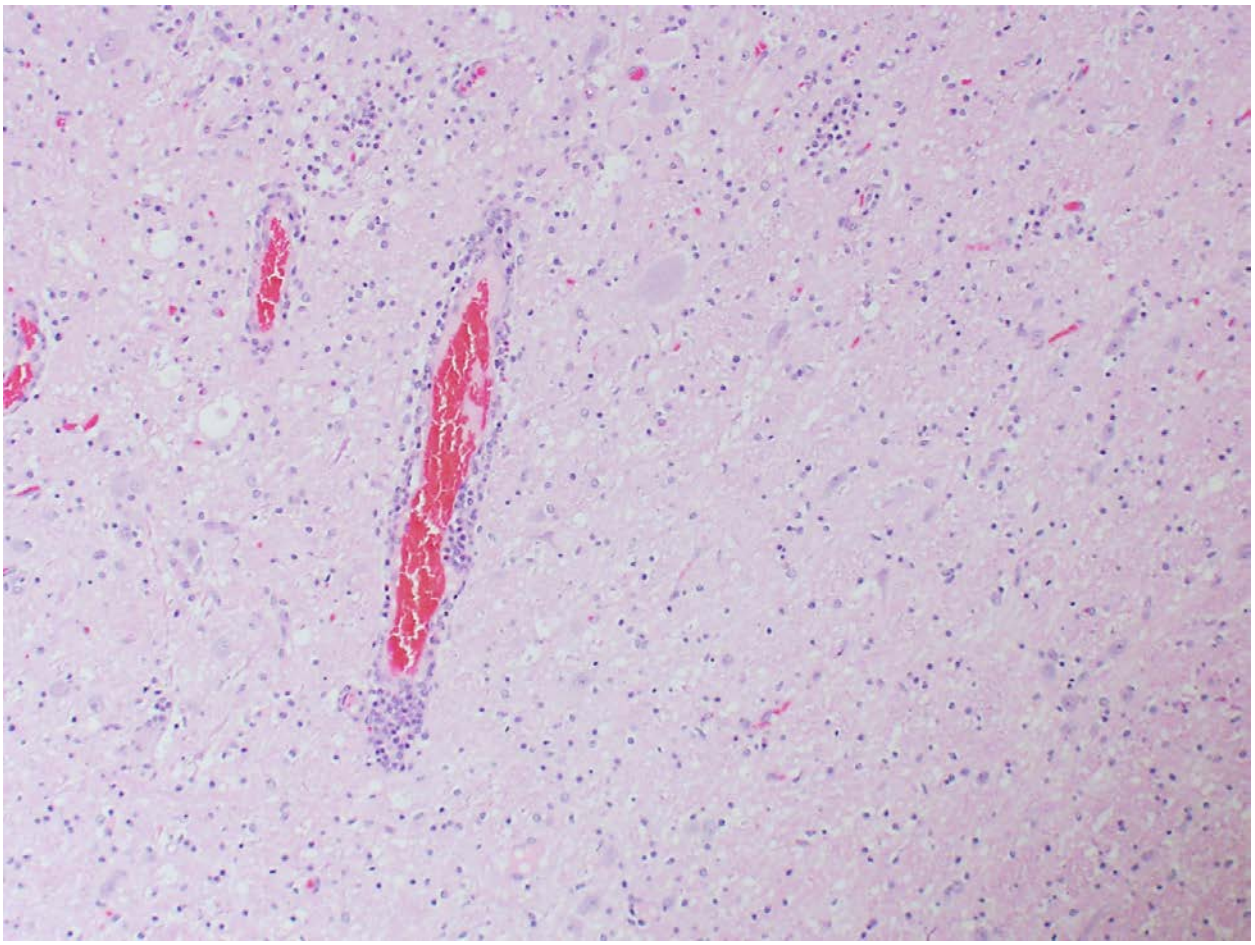
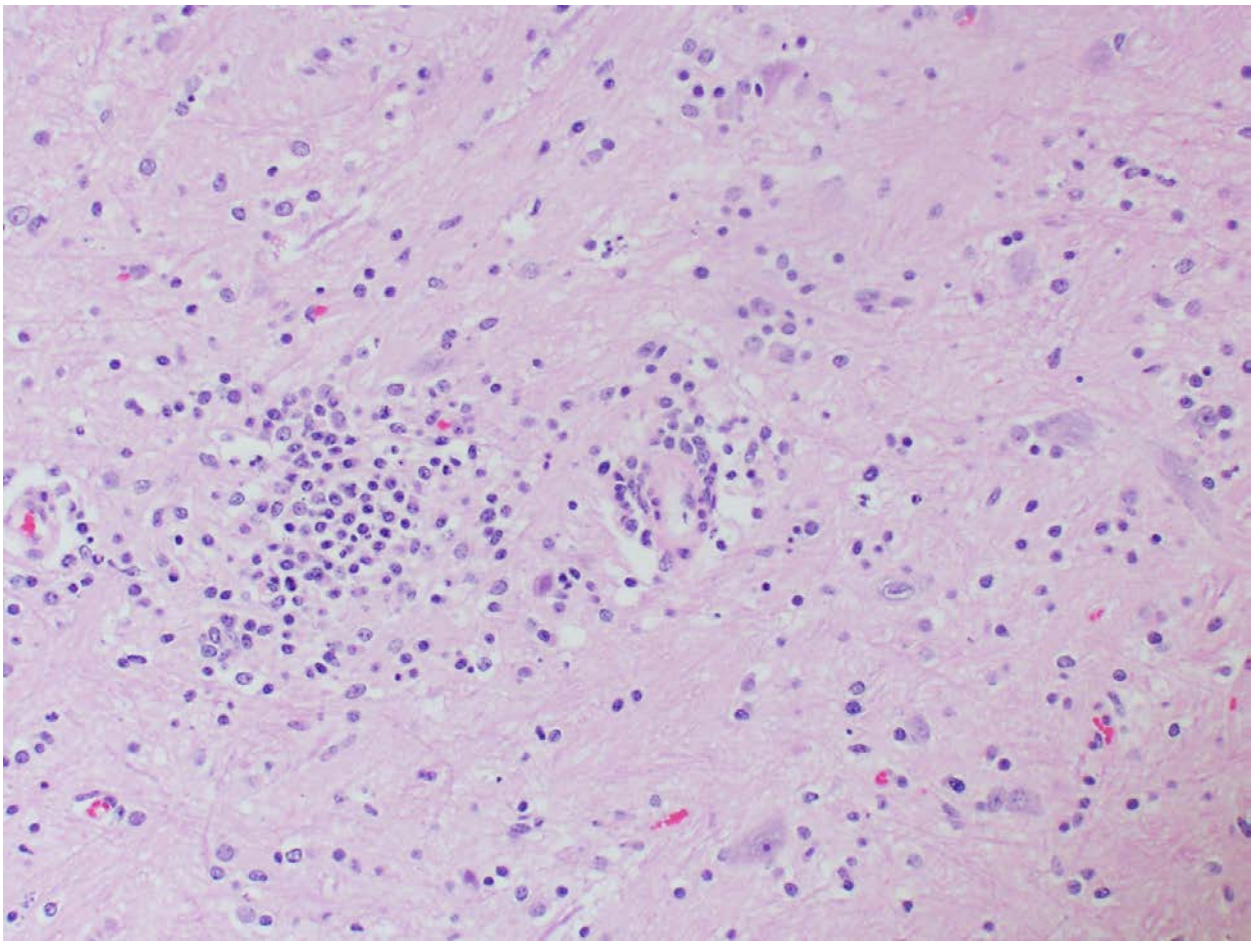


Figure 3.



Lung: There is marked bronchopneumonia. Bronchi, bronchioles and alveolar lumen contain abundant amounts of exudate, characterized by high numbers of degenerate and non-degenerate neutrophils, cellular debris, fibrin and karyorrhectic debris. Additionally, blood vessels and capillaries are often congested and there are small areas of hemorrhage.

Purulent lymphadenitis was noted.

Laboratory diagnosis:
(A), (B), (C), (D)

- Severe, lymphoplasmacytic, necrotizing encephalitis with multifocal areas of gliosis and neuron degeneration
- Fibrinopurulent bronchopneumonia (bacteria)

Comments:

- Histologic examination of CNS sections revealed severe lesions suggestive of a viral encephalitis. Lesions were primarily present within cerebellum and brain stem. Teschovirus/enterovirus/sapelovirus are my primary differentials. Further submission from the same site was received and case has been investigated thoroughly, with porcine sapelovirus demonstrated by PCR. Please see case 2016020472.
- Please correlate clinically and contact the laboratory for further testing or if questions arise. (6/22/16 pa/clm)

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KEY: Tests: FA = Fluorescent Antibody, IHC = Immunohistochemistry, MLV = Modified Live Virus, ORF = Open Reading Frame, PCR = Polymerase Chain Reaction, RFLP = Restriction Fragment Length Polymorphism, VI = Virus Isolation. Agents: BCV = Bovine Coronavirus, BRSV = Bovine Respiratory Syncytial Virus, BVDV = Bovine Viral Diarrhea Virus, CSF = Classical Swine Fever, HPS = *Haemophilus parasuis*, IAV = Influenza A Virus, IBRV = Infectious Bovine Rhinotracheitis Virus, MHP = *Mycoplasma hyopneumoniae*, MHR = *Mycoplasma hyorhinis*, MHS = *Mycoplasma hyosynoviae*, PCV = Porcine Circovirus, PDCV = Porcine Deltacoronavirus, PEDV = Porcine Epidemic Diarrhea Virus, PPV = Porcine Parvovirus, PRCV = Porcine Respiratory

Coronavirus, PRRSV = Porcine Reproductive & Respiratory Syndrome Virus, PRV = Pseudorabies Virus, SVA = Senecavirus A, TGEV = Transmissible Gastroenteritis Virus.

Laboratory Result(s)

Test Ordered	Order Date	Current Status	Complete Date
Comments	4/27/2016	Result Released	4/27/2016
PCR - PCV2	4/6/2016	Result Released	4/6/2016
PCR - Applied Biosystems M. hyopneumoniae	4/6/2016	Result Released	4/6/2016
Hematoxylin and Eosin Slides	4/6/2016	Result Released	4/6/2016

Histopathology

Hematoxylin and Eosin Slides

Animal ID	Specimen	Slides	Comments
A	Assorted	6	
B	Assorted	6	
C	Assorted	5	
D (brain only)	Assorted	4	

Molecular Diagnostic

PCR - Applied Biosystems M. hyopneumoniae

Animal ID	Specimen	Ct / Result	Comment
A, Tube #1	Bronchoalveolar lavage	>37 / Negative	
B, Tube #2	Bronchoalveolar lavage	>37 / Negative	
C, Tube #3	Bronchoalveolar lavage	>37 / Negative	

PCR - PCV2

Animal ID	Specimen	Ct / Result	Comment
A, Tube #1	Bronchoalveolar lavage	>37 / Negative	
B, Tube #2	Bronchoalveolar lavage	>37 / Negative	
C, Tube #3	Bronchoalveolar lavage	>37 / Negative	

Coordination

Comments
Addition of pictures