

57th ANNUAL DIAGNOSTIC SLIDE SESSION 2016.

CASE 2016-2

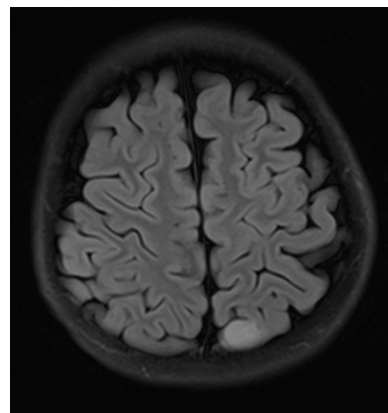
Submitted by:

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Clinical history:

Seven year-old boy with a history of epilepsy. Developmentally, he was delayed in multiple academic areas as well as fine and gross motor skills. EEG at age 4 demonstrated focal slowing over the left posterior electrodes. Brain MRI at age 4 demonstrated a T2 / FLAIR abnormality over the left posterior parietal lobe, a left parietal arachnoid cyst, and a 5 mm inferior cervical tonsillar herniation (Chiari I malformation). The patient had been admitted to the hospital for status epilepticus twice in the last 4 years, and for meningococcal meningitis 3 years earlier.

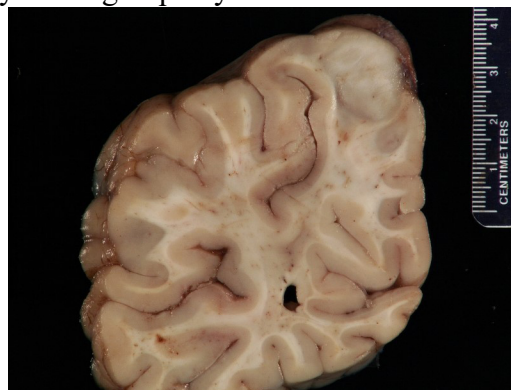


On this admission, the patient complained of his usual prodrome which progressed to a generalized tonic-clonic seizure, bradycardia, and cardiac arrest. Despite aggressive resuscitation, the patient's prognosis remained poor due to ongoing seizure activity, an aspiration event, fever up to 104° F, and development of disseminated intravascular coagulation complicated by bleeding from dislodged femoral arterial catheters. His family elected to redirect care. Death was pronounced approximately 18 hours after seizure onset. His parents requested autopsy.

Autopsy findings:

The general autopsy showed bilateral acute bronchopneumonia, consistent with aspiration, and pulmonary and groin hemorrhage, consistent with a history of coagulopathy.

On neuropathologic examination, coronal sections of the cerebral hemispheres showed a firm, well-circumscribed, gray-tan focus extending from the leptomeningeal surface and displacing/infiltrating the underlying cortical ribbon measuring approximately 1.9 cm in diameter in the superior left posterior parieto-occipital cortex. A superficial cystic expansion of leptomeninges consistent with an arachnoid cyst was immediately adjacent to the firm, well-circumscribed focus. Also identified were multiple, bilateral hemorrhagic watershed infarcts at the gray-white matter junction and in the bilateral basal ganglia.



Material submitted:

H&E slide (1) of lesion depicted in gross photographs

Points for discussion:

1. Differential diagnosis of T2-FLAIR abnormality, given a history of epilepsy
2. The role of neuropathological examination in deaths related to epilepsy