65th ANNUAL DIAGNOSTIC SLIDE SESSION 2024

CASE 2024 [2]

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Clinical History: The patient is a male in his 70's with a long-standing history of dementia. His family history was significant for multiple family members with early onset dementia. His cognitive symptoms began in his fifth decade of life and he retired from his regular work due to cognitive impairment in his late 40s. Around this time, he was also diagnosed with a seizure disorder. A magnetic resonance imaging (MRI) study performed several years after onset of the dementia showed only mild parenchymal volume loss and electroencephalography (EEG) was consistent with his known seizure disorder. His neurologic impairment progressively worsened over the course of several decades, developing a sleep disorder, falls, depression, and agitation. He spent the last several years of his life in a nursing facility. At the time of his death, he was non-verbal and required assistance with all activities of daily living.

Autopsy findings: An autopsy was performed restricted to the brain. The fixed brain weight was 1430 g (reference range 1100-1700 g). The cerebral gyral pattern was of normal configuration without generalized atrophy. Coronal sections showed mild symmetric hydrocephalus of the lateral ventricles. Serial sections of the brainstem and cerebellum revealed no lesions and showed that the substantia nigra and locus ceruleus were well pigmented.

Material submitted:

1. H&E stained sections from cortex and midbrain

Points for discussion:

1. Differential diagnosis
2. Pathogenesis