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Case Reference Number: NP 2262

Clinical History: This 45 year old man had a ten year history of steady progressive
cognitive decline. Initially, family members noticed that the patient’s memory was
failing and he seemed nervous and unable to concentrate. He was evaluated by a
neurologist in 1984, who described weight loss, insomnia, and anhedonia but a normal
neurological examination. He was referred to a psychiatrist and was diagnosed with
a major depressive episode. In 1986, a magnetic resonance imaging scan revealed
diffuse white matter disease and moderate cortical atrophy. Laboratory studies at that
time included fluorescent Treponemal antibody test, Vitamin B12, erythrocyte
sedimentation rate, heavy metal screens, serum copper, ceruloplasmin, serum lactate,
urine arylsulfatase levels, very long chain fatty acid levels, urine homocystine and a
HIV antibody titer, all of which were unremarkable. The diagnosis of possible
multiple sclerosis was entertained due to the presence of four oligoclonal bands in the
cerebrospinal fluid, although the CSF protein was only 39 mg%.

The patient’s cognition continued to worsen and eventually he required
placement in a protected care setting. In late 1991, a misunderstanding with local
police resulted in his incarceration, who did not recognize his dementia and did not
realize he lived in the nearby care center. He was assaulted in the jail that night by
a fellow inmate and suffered a frontal intraparenchymal hemorrhage and diffuse
subarachnoid hemorrhage. He remained comatose until his death in late 1992.

Autopsy Findings: At autopsy, evidence of the old cerebral trauma was seen with
remote subarachnoid hemorrhage and a hemosiderin-lined cavity in the frontal pole.
The white matter was discolored, more prominently anteriorly.

Materials Submitted: 1. H & E section of cerebrum
1. Unstained slide

Points For Discussion: 1. Diagnosis?
2. Pathogenesis?