

## Case 1992-6

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### ***Clinical Summary:***

This 29 year-old man was in good health until one morning when he awoke with a sore throat and headache. He presented to a hospital 48 hours later with a low-grade fever (99.7°F) and with marked agitation and hyperactivity that failed to respond to Haldol (25 mg) and Ativan (10 mg) over a 12 hour period. The patient denied any recent bites from ticks, mosquitos, fleas, spiders or animals. He did not eat home-canned foods and denied using illicit drugs. He reported drinking a six pack of beer with some whiskey on weekends. There was no history of psychiatric disorders.

Within the previous three months, 27 cases of St. Louis encephalitis (3 fatal) had been reported in the vicinity of Pine Bluff, Arkansas; twenty three cases of Rocky Mountain Spotted Fever (2 fatal) had been reported in central Arkansas; and 1 case of eastern equine encephalitis confirmed in a horse in Hazen, Arkansas. All of these sites lie within an 80 mile radius of the patient's home.

Urine and serum drug screens were positive for tetrahydrocannabinol but negative for amphetamines, phencyclidine, cocaine, alcohol, strychnine and anticholinesterase agents. Serum anti-HIV antibodies were not detected and a serum VDRL was negative.

On the second hospital day the patient developed a temperature spike to 106°F (41.1°C). Computed tomographic and magnetic resonance imaging studies of the head, performed at this time, showed normal anatomy. A spinal tap revealed a normal opening pressure, and returned clear cerebrospinal fluid with 25 mg protein/dl, 96 mg glucose/dl, 1 WBC/cc, 0 RBC/cc and no bacteria. An electroencephalogram showed a resting pattern without evidence of status epilepticus. There was no evidence of startle myoclonus.

The patient's condition continued to deteriorate with muscle fasciculations progressing to paralysis and then coma. On the fourth hospital day the patient suffered a cardiorespiratory arrest from which he was resuscitated. Brain death was documented 7 days after admission and 9 days after the onset of symptoms.

### ***Postmortem findings:***

At autopsy, the brain and spinal cord were severely congested and edematous. There was marked pallor of gray matter throughout the central nervous system, but this was less marked in the cerebellum than elsewhere. The meninges showed no opacification. The lungs were congested with a large amount of viscous mucus in the airways, and both skeletal and cardiac muscle appeared somewhat pale.

***Slide provided:*** Cerebellum (hematoxylin and eosin)