

Submitted by: Dr. Irene Trombley
Department of Pathology (Neuropathology)
University of Louisville
Health Sciences Center
Louisville, KY 40292

Clinical Abstract:

The patient was a 58-year old mailman in previous good health until four months antemortem, when he began experiencing pain radiating from his back into his left leg after stepping off a ladder. His pain progressively worsened and he was admitted for evaluation and therapy about 1½ months after onset. Conservative therapy with bed rest and traction was unsuccessful, and myelogram was planned. Additional symptoms that had developed during this time included double vision, belligerent and disoriented behavior, difficulty urinating, and new pain radiating to the right thigh. Myelogram revealed a small anterolateral defect at the L4-5 level and laminectomy was performed.

Following surgery, patient's condition worsened with new findings of left leg weakness, left foot numbness, right lateral rectus palsy, orthostatic hypotension, and increasingly bizarre mental status. At this point, he was transferred to our hospital.

Neurological evaluation on transfer (one month antemortem) revealed pertinent findings of bilateral lateral rectus palsy, disorientation, loss of reflexes in both lower extremities and left upper extremity, and definite sensorimotor loss in left lower extremity as noted above. Work-up included a normal CT scan of head, EEG indicative of diffuse encephalopathy, EMG indicative of axonal neuropathy, and spinal tap with elevated protein (150-200). Work-up for axonal neuropathy was negative, including heavy metal screen and pesticide analysis of fat biopsy. Muscle biopsy showed neurogenic atrophy and peripheral nerve biopsy confirmed diagnosis of axonal degeneration. Patient continued to deteriorate with increasing neuromuscular weakness and vasomotor instability, with terminal bradycardia and hypotension.

Autopsy Findings:

General Autopsy revealed severe muscle wasting, pneumonia, and acute viral hepatitis B. Examination of brain revealed acute hemorrhagic infarcts mostly in "watershed" distribution along with "respirator brain" changes. Spinal cord exhibited coating of the subarachnoid material by a gelatinous material, most prominent in lumbosacral area. This material was also noted overlying base of brain and within choroid plexus. Small gelatinous nodules also studded the cauda equina. No abnormality of bony canal was seen.

Material Submitted: One H&E slide of spinal cord
One unstained slide of spinal cord

Points of Discussion: 1. Diagnosis
2. Origin of lesion