

CASE 1994-2

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Clinical History:

A 29 year old HIV positive male was admitted to Westchester County Medical Center with a 6 month history of right sided weakness, 3 months of mental status changes. He had sustained a seizure 1 week prior to admission. He had dysphagia for 1 week. Seven weeks prior to admission he was seen at a local hospital where a lumbar puncture was performed. The cerebral spinal fluid (CSF) demonstrated a protein level of 140 mg/dl, normal glucose, 4 white blood cells (WBC) (100% lymphocytes), and a negative venereal disease research laboratory test (VDRL). His serum contained treponemal antibodies by Fluorescent Treponemal Antibody test (FTA-ABS). 7 years earlier he was treated for primary syphilis and 4 years later neurosyphilis was diagnosed by a reactive CSF-VDRL. Treated with 12 x 10⁶ units of intravenous penicillin for 10 days. CD4 cell count was 9 cells/mm³ and computed tomography (CT) of the brain was negative. ELISA and Western blot studies for HIV were positive.

Currently he was afebrile, pulse 100, respiratory rate 24. Thrush was noted. Neck was supple and retinal exam normal. Skin, chest, heart, and abdominal examination were unremarkable. Neurologic examination: disoriented, tremulous patient with poor memory. Cranial nerve examination intact but the lower extremities appeared weak. Reflexes intact and symmetric. Plantar reflexes downgoing. Fluconazole was the only medication on admission. Laboratory examination showed a WBC of 3,500 cells/mm³, hematocrit of 31.7%, and platelets 73,000/mm³. Biochemical blood analysis (SMAC) normal except for gamma-glutamyl transferase of 249 U/L. Toxoplasma titers negative but a serum RPR was 1:8 and an FTA was reactive. A CT scan of the head revealed multiple enhancing lesions with a hyperdense nodule in the left centrum semiovale. Surrounding edema caused mass effect on the body of the left lateral ventricle. Additional lesions were noted in the right parietal area. CSF showed 12 WBC (11 lymphocytes) with a normal glucose, protein level of 178 mg/dl, and VDRL reactive at 1:2. CSF was negative for cryptococcal antigens.

The patient was treated with sulfadiazine and pyrimethamine. On the 5th day intravenous cefotaxime was initiated. Decadron was begun on the 9th day. After 11 days of cefotaxime, 12 x 10⁶ units penicillin daily was started. He received 10 days of penicillin therapy. Amphotericin B and ceftazidime were subsequently given. Four days prior to his death, a CT demonstrated obstructive hydrocephalus at the level of the fourth ventricle. CSF cultures negative for mycobacteria and fungi. An autopsy limited to the brain was performed.

Gross examination of the brain revealed several greenish masses ranging in size from 1.5 to 3 cm in diameter. They were located in the left frontal (2) lobe, basal ganglia, right occipital lobes, pons and cerebellum (2). The pontine mass obstructed the fourth ventricle.

Material submitted: 1 H & E slide, 1 Kodakchrome, 1 blank slide.

Points for discussion: 1. Diagnosis
2. Histopathologic correlation