

Submitted by:

Ronald L. Hamilton, M.D., Clayton A. Wiley, M.D., Ph.D., Lawrence A. Hansen, M.D., Marjorie R. Grafe, M.D., Ph.D., (University of California, San Diego: Department of Pathology (Neuropathology)) and J. Fremont, M.D., R. Bitar, M.D. (Department of Internal Medicine, Kaiser Permanente, San Diego).

A thirty year old homosexual male was found to be HIV seropositive after diagnosis of anal condylomata, facial molluscum contagiosum and recurrent oral thrush. His T-helper cell count one year later was 46 (nl. >518) He presented to the emergency room 16 months later complaining of a short episode of disorientation and a three day history of weakness and low grade fever with diarrhea. His current medications included AZT, aerosolized pentamidine (with no history of pneumo-cystis) and acyclovir for presumed viral gingivitis.

Physical exam showed a weak white male with a temperature of 39.8 C. Other vital signs were normal. He was alert and oriented x 3 with halting, repetitive speech. His neck was supple. There was mild anisocoria, L>R. Finger-to-nose test was very shaky on the left. Heel-to-shin was normal. The patient was unable to stand without assistance. The physical exam was otherwise unremarkable. Initial laboratory examination showed a CBC, electrolytes, urinary analysis and chest x-ray which were unremarkable. A lumbar puncture(LP) showed the CSF to be clear with 3 red blood cells and 7 white blood cells. India ink preparation revealed no organisms. CT scan showed slight asymmetry in the lateral ventricles.

The patient was admitted for possible meningitis. An MRI scan of the head showed multiple foci of T1 low, T2 high signal intensity involving cerebellum, red nucleus and right posterior limb of the internal capsule. Acyclovir dose was increased. Blood cultures taken at admission grew Staph. aureus. On the fifth day following admission numerous maculopapular lesions appeared on the fingers and toes. Cultures of these lesions grew staphylococcus. A diagnosis of staph endocarditis was made and Vancomycin started. Acyclovir was discontinued, however, fevers continued to be a problem and on the seventeenth day following admission the patient displayed moderate dysarthria and aphasia. A head CT was unchanged. The following day the aphasia worsened, with increased symptoms of diplopia and headache. LP showed a glucose of 57 and a protein of 38. MRI scan of head showed progression of the lesions previously seen with involvement of the entire pons as well as the right lateral cerebellar hemisphere and middle cerebellar peduncles. The radiologists felt that it "looked like nothing they had seen before". The patient became unresponsive to physical or verbal stimuli and the family agreed to comfort care measures. He died on the 22nd hospital day.

NECROPSY EXAMINATION:

Examination at autopsy showed an acute pyelonephritis, a RML lung infiltrate and no evidence of endocarditis. The brain was remarkable for hemorrhagic necrosis of the entire basis pontis with extension into the upper medulla and proximal cerebellar peduncles.

Submitted: One (1) hematoxylin and eosin stained slide of cerebellar peduncle and one (1) Kodachrome of a diagnostic immunocytochemical stain.

Points for discussion: Pathogenesis of this lesion?