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Case 1

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Clinical Abstract:

The patient was a 25 year old woman who was an alcoholic and an intravenous drug abuser. She was admitted to hospital six months prior to death because of malaise, intermittent fevers, headache, weight loss, and urinary incontinence. On physical examination, she was wasted and had oral thrush and lymphadenopathy. Neurologic examination: lethargic, with diminished orientation and mentation, left ptosis, poorly reactive pupils, decreased muscle strength, and supple neck. Admission laboratory data included a white blood cell count of 3,700 (21.9% lymphocytes), hematocrit 27.1%, T4/T8 ratio 0.21, and positive serum antibody (by ELISA) for human immunodeficiency virus (HIV, or HTLV-III). Lumbar puncture revealed 13 white cells, with glucose 26 mg/dl and protein 99 mg/dl. An India ink preparation was positive for Cryptoccocus, and CSF cryptococcal antigen titer was greater than 1:1000. Cryptococcus neoformans was also isolated from the CSF. The patient was begun on amphotericin B and 5-fluorocytosine. Following institution of therapy, the patient's mental status improved.

Six weeks after admission, the patient developed focal seizures. Chest film disclosed bilateral pneumonia, and she was begun on tobramycin and clindamycin. One week later she developed ulcerated nasal, perioral and left ear herpetiform lesions, treated with acyclovir cream. On repeat lumbar puncture, cryptococci were again identified on India ink preparation, although they could not be isolated from the CSF. A different organism was isolated, however. Two weeks later the patient developed spiking fevers; Staphylococcus aureus was cultured from the blood, for which she was treated with nafcillin. Over the ensuing months the patient continued to manifest fever and decreased mental status. She was continued on amphotericin B throughout her entire hospitalization. Terminally, she suffered cardiac arrest; resuscitative efforts were unsuccessful.

Autopsy Findings:

There was disseminated Mycobacterium avium-intracellulare, which was cultured from systemic organs only. Mycobacterium tuberculosis hominis was recovered from blood and kidney. No other organisms were isolated from the systemic organs. The base of the brain exhibited a thick, pale yellow exudate.

Material Submitted: One H&E slide and one unstained slide from the base of the brainstem.

Point for Discussion: Diagnosis.