Images in Clinical Medicine: Miliary Tuberculosis of the Brain

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Dear Sir,

A 40-year-old Indian male was admitted with a history of low-grade fever for the past 6 months, for which routine workup done several times has been noncontributory. At the time of his presentation to our hospital his fever spikes had increased and were now associated with headaches and vomiting. Computed tomography of the chest revealed mediastinal and hilar lymphadenopathy (fig. 1). A magnetic resonance scan of the brain revealed multiple nodular lesions with surrounding edema (fig. 2). Analysis of the cerebrospinal fluid revealed 60 cells, 85% lymphocytes, protein 212 mg/dl, and glucose 37 mg/dl (blood glucose 120 mg/dl). Stereotactic brain biopsy revealed inflammatory caseating granulomas with presence of acid-fast bacilli (1+; fig. 3). The patient was started on frontline antitubercular therapy, namely isoniazid, rifampicin, ethambutol, pyrazinamide, and streptomycin, pending results of acid-fast bacilli culture sensitivity. At the time of this writing he remains on antitubercular therapy with intermittent fever and headaches.

**Fig. 1.** High-resolution computed tomography scan of the thorax, showing centrilobular nodules and mediastinal and hilar lymphadenopathy.

**Fig. 2.** Coronal $T_1$-weighted magnetic resonance scan of the brain, showing multiple nodular lesions with surrounding edema.

**Fig. 3.** Ziehl-Neelsen stain showing caseating granulomas and acid-fast bacilli.