VORICONAZOLE FOR THE TREATMENT OF COCCIDIOIDES IMMITIS MENINGITIS: REPORT OF A CASE

Proia LA*, Tenorio AR
Section of Infectious Diseases, Rush Medical College, Chicago, IL

Treatment of meningitis secondary to Coccidioides immitis (Cocci) may be difficult. We present a case of Cocci meningitis refractory to multiple therapies, including lipid formulations of amphotericin B (amB) and high dose fluconazole (fluc), which subsequently responded to treatment with voriconazole (Pfizer, Inc., Grotton, CT). In Feb '00, while living in Phoenix, AZ, a 30 yo Caucasian man developed fever, myalgia, and dry cough that lasted 3 wks. Three mos later he presented with severe headache, neck stiffness, and photophobia. Lumbar puncture (LP) revealed 300 wbcs (96% lymphs), elevated total protein (TP), and low glucose. Bacterial and fungal stains and cultures were negative. Serum and CSF Cocci antibodies (Abs) by complement fixation were 1:16 and 1: 2, respectively. Serum IgM and IgG Abs to C. immitis by enzyme immunoassay were positive. Evaluation for underlying immunodeficiency was negative. IV amB deoxycholate was begun but significant azotemia developed. Liposomal amB (L-amB) was substituted and followed by maintenance therapy with oral fluc (600mg/d). During the next 3 mos, recurrent headaches required intermittent treatment with both L-amB and fluc. The patient moved to Chicago and, during the next 5 mos, had recurrent headaches associated with increased CSF pleocytosis and rising serum (1:32) and CSF (1:8) Cocci Ab titers. Treatment with L-amB, amB lipid complex, or high dose fluc resulted in minimal clinical improvement, while treatment with intrathecal amB was complicated by infusion-related neurologic toxicity. When headaches and CSF pleocytosis persisted, high dose voriconazole (800mg/d) was substituted after which, his headaches resolved. Later, development of low back pain resulted in diagnosis and excision of a T11 intradural abscess (culture negative). Surgery was complicated by communicating hydrocephalus that required a VP shunt. During 10 mos of treatment with voriconazole, serum Cocci Ab titers have been undetectable, CSF cell counts have normalized, and CSF Cocci Ab titers have decreased significantly. Given that cure of Coccidioides immitis meningitis may not be possible, lifelong therapy is planned. Voriconazole may be an effective antifungal agent for the treatment of meningeal infection secondary to Coccidioides immitis.