that seizures due to recreational drug abuse appear to be selflimiting and not associated with neurologic sequelae. Anticonvulsant treatment is usually not required.

## CNS INFECTIONS

## LYME DISEASE

Six patients with central nervous system manifestations of Lyme disease are reported from the Department of Neurology, Georgetown University School of Medicine, Washington, DC. Behavioral changes, ataxia, and/or weakness in bulbar or peripheral muscles developed weeks to years after the initial infection. Four patients had lymphocytic pleocytosis in the CSF and two had MRI evidence of demyelination. All patients had elevated antibody titers to B burgdorferi in serum and all were treated with high-dose intravenous penicillin. Four had recovered completely within one to three months. One patient had persistent brief episodes of vestibular neuronitis and optic neuritis 15 months after antibiotic therapy for mvelitis. One patient in whom antibiotic therapy had been delayed for two years after the onset of CSF abnormalities failed to respond to repeated courses of IV penicillin and showed a progressive neurologic involvement with bilateral peripheral facial weakness, double vision, weakness of triceps, wrist and finger flexors and loss of sensation in hands and arms. (Pachner AR et al. Central nervous system manifestations of Lyme disease. Arch Neurol July 1989; 46:790-795).

COMENT. A case of latent Lyme neuroborreliosis is reported in a 17 year old boy from the University of Munich, Germany (Pfister H-W et al. Neurology August 1988; 39:1118). Borrelia burgdorfer was isolated from the CSF, serum IgG antibody titers were elevated, but concurrent inflammatory signs of CSF as well as intrathecal antibody production were absent. Bilateral tinnitus was the only clinical symptom and this could not definitely be attributed to the Borrelial infection.

Lyme disease is the subject of Medical Progress (Steere AC. N Engl J Med August 31, 1989; 321:386). Lyme disease commonly begins in summer with a characteristic skin lesion, erythema migrans, accompanied by flu-like or meningitis-like symptoms. Weeks or months later the patient may have neurologic or cardiac abnormalities. migratory musculoskeletal pain or arthritis. After the first several weeks of infection almost all patients have a positive antibody response to the spirochete and serologic determinations are currently considered the most practical laboratory aid in diagnosis. author concludes that appropriate antibiotics are usually curative but longer courses of therapy are often needed later in the illness and some patients may not respond. The fetus may be at risk in mothers treated for the disease; a pregnant woman in Europe whose erythema migrans was treated with oral antibiotics gave birth to an infant who died of Lyme encephalitis. (Weber K et al. Pediatr Infect Dis J 1988; 7:286).