

Clinical features of nipah virus encephalitis among pig farmers in Malaysia

Type: Article

Abstract:

Background: Between September 1998 and June 1999, there was an outbreak of severe viral encephalitis due to Nipah virus, a newly discovered paramyxovirus, in Malaysia. **Methods:** We studied the clinical features of the patients with Nipah virus encephalitis who were admitted to a medical center in Kuala Lumpur. The case definition was based on epidemiologic, clinical, cerebrospinal fluid, and neuroimaging findings. **Results:** Ninety-four patients with Nipah virus infection were seen from February to June 1999 (mean age, 37 years; ratio of male patients to female patients, 4.5 to 1). Ninety-three percent had had direct contact with pigs, usually in the two weeks before the onset of illness, suggesting that there was direct viral transmission from pigs to humans and a short incubation period. The main presenting features were fever, headache, dizziness, and vomiting. Fifty-two patients (55 percent) had a reduced level of consciousness and prominent brain-stem dysfunction. Distinctive clinical signs included segmental myoclonus, areflexia and hypotonia, hypertension, and tachycardia and thus suggest the involvement of the brain stem and the upper cervical spinal cord. The initial cerebrospinal fluid findings were abnormal in 75 percent of patients. Antibodies against Hendra virus were detected in serum or cerebrospinal fluid in 76 percent of 83 patients tested. Thirty patients (32 percent) died after rapid deterioration in their condition. An abnormal doll's-eye reflex and tachycardia were factors associated with a poor prognosis. Death was probably due to severe brain-stem involvement. Neurologic relapse occurred after initially mild disease in three patients. Fifty patients (53 percent) recovered fully, and 14 (15 percent) had persistent neurologic deficits. **Conclusions:** Nipah virus causes a severe, rapidly progressive encephalitis with a high mortality rate and features that suggest involvement of the brain stem. The infection is associated with recent contact with pigs. (N Engl J Med 2000;342:1229-35.) (C) 2000, Massachusetts Medical Society.

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