

Psychiatric disorders in neurocysticercosis

SIR: Unfortunately psychiatrists are not aware of the epidemiological relevance of neurocysticercosis (NCC) and its psychiatric problems. The most frequent neuroparasitosis, NCC is the infestation of the central nervous system with larvae of the cestode *Taenia solium*. Complex neurological, neurosurgical, and psychiatric syndromes result. Endemic in developing countries, including China and India, the world's most populated, NCC is also endemic in groups within the developed countries, especially among the growing number of migrants (the American Hispanics are a good example) and travellers (Richards *et al*, 1985).

Last century, NCC was observed in up to 2% of the brains autopsied in Berlin. Hidden NCC may have occurred in patients of the German fathers of psychiatry, since it was so common. Griesinger (1862) produced the first classification of NCC, based upon its psychiatric symptoms. The difficulties for diagnosis during life were formidable. Up until the 1930s, NCC captured much attention of psychiatrists, but not after that, as the interest in neuropsychiatry gradually faded. Until recently, pathological examination of brain tissue was the only means for secure diagnosis. Improvements in immunodiagnosis and neuroimaging (computerised tomography and magnetic resonance imaging) last decade brought to the surface an iceberg of undiagnosed cases.

In endemic regions, NCC is currently part of the differential diagnosis of most neurological disorders, but not of psychiatric. The pathology of NCC include arachnoiditis, infarcts secondary to vasculitis, hydrocephalus secondary to meningeal inflammation and fibrosis, parasitic cysts (parenchymal, intraventricular, and spinal), mass effect of large cysts and fibrocalcified nodules. The clinical manifestations are pleomorphic, depending on number, size, and topography of lesions, inflammatory and immune host responses and sequelae of previous infestations (Sotelo *et al*, 1985). More severe cases are life-threatening, neurosurgery is commonly necessary and incapacitating disabilities often result. Soon after the onset patients may be unable to work.

NCC frequently affects life quality and social support. The German psychiatrist Henneberg affirmed that psychiatric problems were never absent in NCC.

In addition to neurobehavioural disorders associated with neurological and neurosurgical problems, pure psychic forms are found in up to 15% of the NCC patients, which mimic various psychiatric disorders. In England, among 450 soldiers who acquired NCC in service abroad, Dixon *et al* (1961) reported psychiatric forms in 39, organic deterioration

in 21, affective disorder in 11, schizophrenia in 3, schizoidy in 1, paranoia in 1 and psychoneuroses with hysterical features in 2.

NCC mimics schizophrenia, and, recently, in Middlesex, a case of NCC was detected among 268 cases of first-episode schizophrenia investigated for medical illnesses (Johnstone *et al*, 1987). In homes for the elderly in South America, NCC dementia is misdiagnosed as Alzheimer's (Travares, 1993). Psychiatrists seldom consider it in the differential diagnosis, in spite of NCC being quite common among psychiatric patients in endemic areas. We recommend that NCC be regularly included in the differential diagnosis of psychiatric disorders in such areas and in migrants and travellers.

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Increased neuronal excitability in panic disorder

SIR: Panic disorder, in spite of the marked autonomic overactivity, has been of surprisingly little interest to neurologists. To examine whether the pathophysiological mechanism in panic disorder is related to increased neuronal excitability, we examined 14 patients (10, women, 4 men; average age 34 years) who met the DSM-III-R criteria for panic disorder without agoraphobia, and compared them with an age-matched control group (11 women, 3 men).

On pathognomonic electromyographic examination, tetany in the form of typical repetitive activity during hyperventilation ($P < 0.002$), as well as a finding of the increased nerve excitability (Chvostek's phenomenon) ($P < 0.001$), was more common in patients with panic disorder. No changes in the serum electrolytes (calcium, magnesium, phosphorus, potassium) were found in either group.