

NEUROCYSTICERCOSIS IN THE NORTH OF PORTUGAL (Abstract)*. Thesis. Porto, 1995.

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Based on hospital data, the author attempted to clarify the classification of neurocysticercosis (NCC), estimate the relative frequency of different clinical presentations of NCC diagnosed by CT-scan, characterize its epileptic syndrome and factors that may influence seizures control and evaluate the results of medical and surgical treatment. The seroprevalence of human infection in an at-risk population was also analyzed. From hospital and population studies a few suggestions to be implemented in Portugal resulted, aiming to eradicate the parasitosis.

The present study concerned 348 cases of NCC diagnosed from 1983 to 1992 almost all living in Northern Portugal. In 52% of the cases the infection was inactive and asymptomatic. Inactive but symptomatic forms (72% of all symptomatic cases) manifested themselves only by seizures. The remaining 28% of symptomatic cases were classified as active forms due to the presence of cysts or granulomas in the cerebral parenchyma (parenchymal forms) or in the basal cisterns and/or ventricular system (extraparenchymal forms). Active parenchymal NCC was characterized as follows: 1) mean age of onset 31 years; 2) epileptic seizures; 3) single or multiple cysts and/or granulomas frequently associated with calcifications; 4) an usually normal cerebrospinal fluid (CSF) with a seldom negative enzyme-linked immunosorbent assay (ELISA) test; and 5) good response (90% resolution) to anticysticercal drugs. Conversely, active extraparenchymal NCC had the following features: 1) a mean age of onset of 43 years; 2) an acute, chronic or intermittent intracranial hypertension, less frequently a stroke or dementia; 3) cysts preferentially located in basal cisterns combined with hydrocephalus; 4) a CSF always with an inflammatory profile with eosinophils, intrathecal synthesis of immunoglobulin G and a positive ELISA test; and 5) failure of anticysticercal drugs, leading to the placement of a ventriculo-peritoneal shunt and a prolonged steroid therapy. This form corresponds to the worst prognosis. The epileptic syndrome (143 patients) corresponds to: 1) a mean age of seizures onset of 29 years; 2) partial seizures in 70% of the patients; and 3) a remission of seizures in 66% of the patients. A late onset and tonic-clonic generalized seizures were good prognostic indicators.

A pilot epidemiologic survey comprising coproparasitological and serological (enzyme-linked immunoelectrotransfer blot) evaluation was carried out in a Northeastern village with 81 inhabitants. Eight per cent of seropositivity were found in asymptomatic persons, one of whom with inactive NCC demonstrated by CT-scan. One third of the inhabitants had intestinal parasitosis, but no cases of taeniasis were observed. All examined pigs were seronegative.

Hospital and epidemiological data definitively demonstrated the endemic nature of *Taenia solium* taeniasis/cysticercosis in Northern Portugal. The global analysis of the problem strongly recommends a planned medico-sanitary intervention aiming to identify carriers of *Taenia solium*, in order to, along with socio-economic development, accelerate the eradication of the parasitosis.

KEY WORDS: cysticercosis, central nervous system, CT-scan, clinical manifestations, epidemiology, Northern Portugal.

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