

Prevalence of neurocysticercosis among epilepsy patients: A hospital-based study

Rohit Mishra

St. George's University, West Indies

Background: Neurocysticercosis is a parasitic infection of the central nervous system caused by the larval form of the pork tapeworm, *Taenia solium*. It is a leading cause of acquired epilepsy worldwide, particularly in regions with inadequate sanitation and hygiene. In India, neurocysticercosis is a significant public health concern, with a high prevalence in rural communities. Understanding the demographic, clinical, and neuroimaging characteristics of affected individuals is crucial for effective management and control strategies. This study aimed to assess these aspects among epilepsy patients in India.

Methods: This cross-sectional study was conducted in a tertiary care hospital. Participants were screened for neurocysticercosis seropositivity using Enzyme-Linked Immunosorbent Assay (ELISA) and clinical evaluations. Neuroimaging (CT scans) was performed to identify neurocysticercosis lesions and characterize their features. Data on demographics, epilepsy duration, seizure types, and socioeconomic status were collected. Statistical analysis included chi-squared tests, and t-tests. Ethical approvals were obtained, and informed consent was obtained from participants or their guardians.

Results: Of 139 participants, 51 were seropositive for neurocysticercosis. Significant differences were found in age distribution ($p < 0.001$), with seropositive individuals more likely to be below 20 years. Mean age differed ($p < 0.001$) with seropositive participants younger (30.5 years) than seronegative (34.6 years). Gender ($p = 0.028$) and primary education ($p = 0.048$) were also significant. Seropositive cases exhibited more multiple lesions ($p < 0.001$), larger lesion size ($p = 0.003$), calcifications ($p = 0.006$), cysts ($p < 0.001$), and perilesional edema ($p < 0.001$). Ring enhancement was more common in seropositive individuals ($p < 0.001$).

Conclusions: This study highlights distinct clinical and neuroimaging characteristics associated with neurocysticercosis in seropositive individuals compared to seronegative ones. The findings emphasize the importance of considering these factors in the context of the disease. Understanding the demographic and clinical profiles of affected individuals is crucial for improved diagnosis and tailored treatment strategies, particularly in regions with a high prevalence of neurocysticercosis.

Biography

Rohit Mishra is a Clinical Tutor of Pathology at St. George's University in Grenada, West Indies. He received his MBBS degree from Manipal University in India in 2008. He then completed his residency in Pathology at the University of Toledo Medical Center in Ohio in 2015.

Received: October 03, 2023; **Accepted:** October 06, 2023; **Published:** October 10, 2023
