Abstract

**Background:** There is emerging awareness that essential tremor (ET) ranks among the most common neurological diseases. However, the estimates of the prevalence of ET vary widely and there is little existing data on the prevalence of ET in sub-Saharan Africa. Also, the clinical profile of community-based compared to hospital-based ET cases in this environment has also not been compared.

**Methods:** As part of an ongoing prospective community-based Epidemiology of Stroke in Lagos (EPISIL) study, a total of 3000 randomly selected adults living in Surulere LGA were administered a screening questionnaire for ET, followed by a face-to-face examination of the positive responders to validate the diagnosis of ET. Age- and sex-matched negative responders who were healthy were also recruited as controls for comparison to the ET cases. Furthermore, consecutive ET cases attending the neurology out-patient clinic of the Lagos University Teaching Hospital (LUTH) were recruited. Prevalence of ET (per 1000) was determined using the community based ET cases, and the clinical profile of ET (demography, tremor distribution, duration, age at onset, severity, etc.) was documented. Cognitive function, anxiety and depressive symptomatology were evaluated using the CSI’D, HARS, and ZSDS respectively. Clinical characteristics of ET in the community and from the hospital were compared.

**Results:** Forty participants who answered yes to any of questions in the ET screening questionnaire. Of these, 36 (19 females and 17 males) received a final diagnosis of ET after physical examination, giving a crude prevalence rate overall of 12 per 1000 for the total
population (95% CI = 8.1-15.9). Age-specific prevalence increased with the advancing age for both men and women. Following age adjustment to the WHO New World Population, the age-adjusted prevalence rate of ET was 23.8 per 1000.

For the clinical study twenty consecutive ET patients were also recruited from the clinic. There was no significant difference between the hospital and the community-based cases with respect to age, age at onset, and family history (P>0.05). The mean age of ET cases was 57 years, mean age at onset was 43 years and 39% had a positive family history of ET.

Compared to the community cases, duration of tremor before the study was longer (11 years vs. 5 years) in the hospital vs. community cases (p=0.02). Also, severity of tremor was higher in the hospital cases (21 vs. 15) using the clinical Tremor Rating Scale Scores (p=0.02).

Ninety eight percent of the community based were previously undiagnosed and hence not on medication for their illness. The frequency of neuropsychiatric (cognitive impairment, depression and anxiety disorder) features in people with ET was not increased when compared to the normal population in this study using various screening instruments (CSI’D, ZRDS, and HARS).

**Conclusion:** Prevalence of ET (1.2%) in this study is higher than previously reported (0.01%) in Sub-Saharan Africa. The clinical profile of the community and the hospital-based patients were similar except for severity of tremor which was higher and duration of tremor which was longer in the clinic based ET. People with ET in this environment do not appear to have a higher frequency of impaired cognition, depression and anxiety disorders compared to healthy population living in Surulere Local Government area.