Essential tremor (ET) is regarded as one of the most common movement disorders, and is also one of the most common neurological disorders among adults [1–4]. Despite the wealth of epidemiological data derived from the recent studies of ET, prevalence has not yet been established with precision. In a review of more than 20 prevalence studies, estimates of crude prevalence varied substantially from 0.008% to 22% (i.e. an approximately 3,000-fold difference between the lowest and highest estimates) [4]. It is rather difficult to compare the prevalence of ET across different geographic areas because of a number of methodological issues [4]: (1) there is a great deal of variability of the surveyed populations in terms of age structure, ethnic origin and gender composition; (2) many of the prevalence studies did not provide a definition for ET; (3) there is no test to validate a clinical diagnosis of ET [1–3]; (4) the motor manifestations of ET are relatively restricted [1–3], and the main clinical manifestation (kinetic tremor) may be a feature of diverse disorders of the central and peripheral nervous systems [1–3]; (5) kinetic tremor of the arms may be found to some extent as a normal finding in the ageing population [1, 5, 6]; and (6) hospital record-based prevalence studies carry referral bias and might provide low estimates of ET prevalence. In addition, a major limitation of most studies is the use of screening questionnaires to ascertain cases, and it is possible that direct examination of all subjects might yield higher estimates of prevalence [1]. If one only selects those studies that are population-based and that specify how they define ET, the range of prevalence estimates is narrower (0.4–3.9%) [4].

Another important question is how the prevalence of ET compares with other neurologic disorders. In the Neurologic Disorders in Central Spain (NEDICES), a population-based survey of the prevalence, incidence, and determinants of major age-associated conditions of the elderly (age 65 years and older), data from 4 major neurological conditions (ET, Parkinson’s disease, all types of stroke and dementia) were obtained [7, 8]. The prevalence of ET was estimated to be 4.8% [9], which is similar to that found in other population-based studies on ET [4] and similar to that of stroke (4.9%) [10], but substantially higher than all types of parkinsonism (2.2%) [11]. However, dementia prevalence rates (5.8%; unpublished data) were higher than those of ET. By contrast, in another recent survey, the authors found that ET was less prevalent than Parkinson’s disease in Arabic villagers in Israel (ET prevalence = 0.78% vs. PD prevalence = 1.44%) [12]; however, those results are atypical.

The incidence of ET has been examined in only 2 studies [13, 14]. The incidence rate reported for ET, based on a population-based study (the NEDICES study) [13], was substantially higher (6.3 per 1,000 person-years) than that reported in the first published incidence study of ET that used data from Rochester Minnesota (0.58 per 1,000 among individuals aged 60–69 years, 0.76 per 1,000 among individuals aged 70–79 years, and 0.84 per 1,000 among individuals aged 80 years or more) [14]. In that study [14], the estimate is probably low, because entry into the medical record system as an ET case would have required that the symptoms and signs be severe enough to be recognized by the patient and deemed important enough by the treating medical doctor to require a comment in the medical record [13]. How does the incidence of ET compare with other neurologic disorders in later life? In the NEDICES study, the incidence (per 1,000 person-years among individuals 65 years and older) of ET (6.3) [13] was substantially lower than that of dementia (12.8) [15] and higher than all types of parkinsonism (5.3) [16] and all types of stroke (5.8) [17].

Little has been published about racial differences in the prevalence of ET. In a study in the biracial population of Copiah county, Mississippi, prevalence ratios were not significantly higher for whites than African-Americans [18]. A recent community-based survey performed in Singapore, comparing Singaporean Chinese, Malays, and Indians, showed that the prevalence of ET was marginally higher in Indians than Chinese (p = 0.08) [19]. No Malays with ET were identified [19]. In this issue of Neuroepidemiology, Louis et al. [20] have provided detailed ratings of tremor in handwriting samples of 1,965 participants in a community-based study in northern Manhattan, New York. This is a novel approach because it ensured that each participant had an objective, reliable and quantitative assessment of action tremor severity, regardless of screening questionnaire results. Based on these ratings, they diagnosed ET in 108 (5.5%, 95% CI = 4.5–6.5%). The authors found a significant ethnic difference in the prevalence of ET, with the prevalence among whites being the lowest. Considering that this study [20] did not rely on a screening questionnaire, ethnic differences could exist, although this requires further investigations. Of additional interest is that prevalence reached 21.7% among the oldest old (age >95 years) [20]. Very few studies have provided prevalence rates of ET in the oldest old [21]. So, this investigation is welcomed and adds to the literature regarding the high prevalence of ET among nonagenarians or older.

ET is probably one of the most prevalent neurological diseases, and found mainly in the elderly. However, further precise estimates of prevalence worldwide are needed. A better knowledge of the epidemiological features of ET may contribute towards a better comprehension of this complex and enigmatic disease [22].
References


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