Prevalence of Essential Tremor in the Faroe Islands

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BACKGROUND

Essential tremor (ET) is among the most common neurological diseases and the most common tremor disorder.

The hallmark feature of ET is kinetic tremor, which may be associated with varying degrees of functional disability.

The etiology of ET is complex; both genetic and environmental factors are likely contributors.

No studies of the prevalence of one of the most common movement disorders, ET, have been undertaken in the Faroe Islands.

OBJECTIVES

Given the potential for founder effects in the Islands and the highly genetic nature of ET, the Faroe Islands provide a particularly interesting setting for the study of the prevalence of ET.

Thus, our aim was to estimate the prevalence of ET in a population-based sample in the Faroe Islands and to study the characteristics of ET in that population.

Affiliations

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METHODS

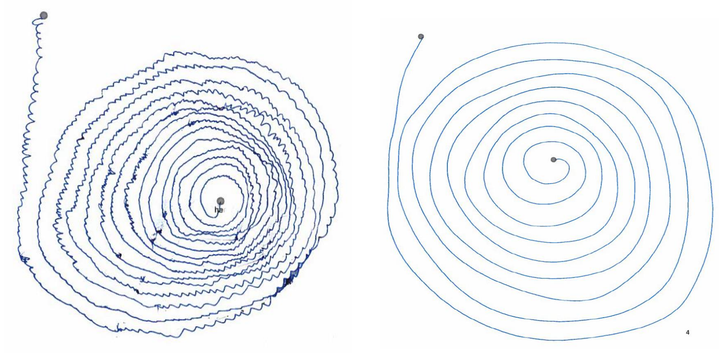
We used a 2-phase, population-based design. First, we screened 1,328 randomly selected Faroese individuals aged ≥40 years.

First Phase Screening

The screening package comprised questionnaires and a request for hand-drawn spirals.

Screenees were instructed to draw each spiral freely on a blank, standard 8.5 × 11-inch sheet of paper using a ballpoint pen, while seated at a table. They were instructed to center the paper at right angles horizontally directly in front of them and start at the center of the page, without lifting their pen.

Hand-drawn Archimedes spiral



ET Case **Normal**

A subsample of 282 individuals with high, intermediate, low-intermediate and low likelihood of having ET was selected to participate in second phase - a clinical evaluation.

Second Phase

A videotaped tremor examination included:

- An ET-specific metric comprised of one test for postural tremor and five for kinetic tremor (e.g., pouring, drinking) performed with each arm
- The motor portion of the Unified PD Rating Scale excluding an assessment of rigidity
- An assessment of dystonia.

Tremor was systematically quantified by a senior movement disorder neurologist using a reliable and valid clinical rating scale.

RESULTS

Table 1. Prevalence estimates of ET stratified by age and gender.

	Prevalence (%), 95% CI
Crude prevalence	2.93 (2.16 – 3.99)
Age group, years	
40-49	0.74 (0.18 – 2.32)
50-59	2.62 (1.30 – 4.98)
60-69	3.56 (1.93 – 6.78)
≥70	4.80 (3.19 – 7.15)
Age-adjusted	3.11 (2.28 – 4.16)
Age–standardized*	2.84 (2.64 – 3.06)
Gender	
Male	3.79 (2.59 – 5.65)
Female	2.10 (1.30 – 3.49)
Gender-adjusted	2.90 (2.09 – 3.90)
Gender-standardized*	2.96 (2.76 – 3.19)

*Standardized to Faroese Population ≥ 40 years.
ET, essential tremor.

CONCLUSIONS

The estimated prevalence was similar to studies using the same or comparable methodologies.

This is the first population-based study of the prevalence of ET in the Faroe Islands.

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