



The role of Frailty in Adult Onset Focal Dystonia: a cross sectional study

Petrioli Matteo¹, Canevelli M.¹, Costanzo M.¹, Marchet F.¹, Giannarelli T.¹, Toccaceli Blasi M.¹, Conte A.¹, Defazio G.², Bruno G.¹, Berardelli A.¹, Belvisi D.¹, Fabbrini G.¹

1. Department of Human Neurosciences, Sapienza University of Rome, Rome, Italy

2. Department of Medical Sciences and Public Health, Institute of Neurology, University of Cagliari, Cagliari, Italy

OBJECTIVE

Frailty is a clinical condition characterized by increased vulnerability to adverse health outcomes, resulting from diminished physiological reserves and impaired function across multiple systems. Previous research has demonstrated that frailty, as measured by the Frailty Index (FI), may influence the clinical expression of various neurological disorders. However, its potential role in idiopathic adult-onset focal dystonias (AOFD) remains unexplored. This study aims to validate the use of the FI in patients with AOFD and to investigate the impact of frailty on both motor and non-motor symptoms in this population.

METHODS

This cross-sectional study included 74 patients with AOFD and 79 healthy control subjects. Frailty levels were assessed using a dystonia-specific FI, which excluded clinical variables directly related to the disease. Standardized clinical scales were administered to evaluate motor and non-motor symptom severity, as well as disability, in all AOFD patients. The non-motor domain included psychiatric comorbidities (anxiety and depression), sleep disturbances, and pain. Additional validated scales were employed to assess symptom severity in specific AOFD subtypes, including cervical, cranial, laryngeal, and upper limb dystonias.

RESULTS

The mean FI score was significantly higher in AOFD patients (0.2067 ± 0.111) compared to healthy controls (0.09 ± 0.085) ($p < 0.0001$). Among AOFD patients, FI values were significantly correlated with dystonia severity across all subtypes. Furthermore, higher FI scores were positively associated with greater perceived disability, increased severity of psychiatric symptoms, and more pronounced sleep disturbances.

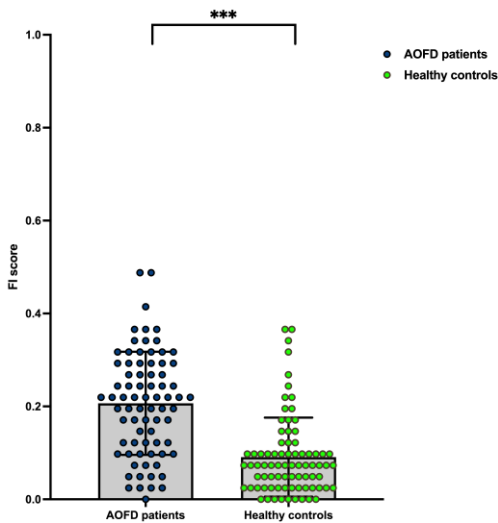


Figure 1

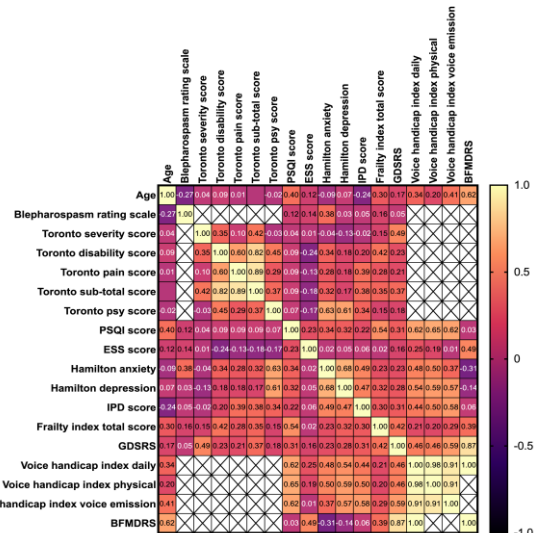


Figure 2

DISCUSSION

These findings highlight the potential role of frailty in modulating both motor and non-motor symptoms in AOFD, suggesting its relevance as a contributing factor to the clinical heterogeneity observed in patients with AOFD.

CONCLUSIONS

Frailty may serve as a valuable tool for assessing the clinical profile of patients with dystonia, enhancing risk stratification. Integrating frailty assessment into routine clinical practice could support the early identification of high-risk patients and enable more personalized therapeutic approaches.



24-28 Ottobre 2025
Padova Congress

55° CONGRESSO
SOCIETÀ ITALIANA
DI NEUROLOGIA