A Longitudinal Study of Delirium Motor Subtypes in Elderly Medical Inpatients

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Introduction: Delirium is a common syndrome with considerable clinical heterogeneity that includes a variety of motor subtypes. Because the phenotypes of delirium typically fluctuate, understanding the longitudinal stability of subtypes is crucial to evaluate their relevance for treatment and outcome.

Aims & objectives: To examine the changes (variability) in motor subtype profile in patients with delirium.

Methodology: Observational, longitudinal study of elderly medical patients admitted to Sligo University Hospital. Measurements: Delirium Motor Subtype Scale (DMSS), DRS-R98, and assessments of comorbidity and function.

Results: 58 out of 198 participants developed delirium (prevalence and incident). Mean age (n=58) equal 84.02 (SD 6.5), 27 (46.6%) females.

The hyperactive subtype and no subtype n=20 (34.5%) were identified as the most common, followed by hypoactive n=15 (25.9%), and mixed subtype n=3 (5.2%), at the first assessment. The 'no subtype' had lower DRS-R98 scores when compared to other subtypes (p-values<0.01). After excluding participants with only one assessment (n=2), 29 (51%) did not change subtype during the assessments, 22 (39.3%) had motor fluctuation and 5 (8.9%) were consistently classed as 'no subtype' (note that those who changed from none to any subtype or from any subtype to none were not deemed as a change in subtype). Our findings demonstrate that there was no significant difference in variability and thus the motor subtypes in the present study were found to be stable (x²=2.571, df: 1, p= 0.109). In addition, there was no significant effect observed in relation to the other variables e.g. demographics, severity of illness, DRS-R98, MoCA.

Conclusion/Lesson Learned: Previous studies found motor subtype profile typically stable for orthopaedic patients with delirium. This is the first study which examined the stability of clinical (motor) subtypes in medical inpatients, with similar results. Thus evidence from cross-sectional studies of motor subtypes can be applied to many patients with delirium.
Suggestions for further research: Further longitudinal studies can clarify the stability of motor subtypes across different clinical populations.

Keywords: elderly; delirium; clinical; subtypes; stability