



# The Severity of Mentation Rating Score Is Correlated with Gait / Balance Scores in UPDRS for Patients with Parkinsons Disease

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### Objective:

To study the reliability of the first item (intellectual impairment) score in Unified Parkinsons Disease Rating Scale (UPDRS) to correlate the severities of tremor dominant (TD) and postural instability and gait difficulty (PIGD) subtypes of Parkinsons disease (PD).

### Background:

It has been shown that PD patients with the PIGD subtype have higher incidence of cognitive impairment. However, how well the first item score of UPDRS correlates with the severities of tremor versus postural/balance scores in Part III has not been fully studied.

### Design/Methods:

394 consecutive idiopathic PD patients seen at Houston PADRECC were reviewed. UPDRS was scored by movement disorder specialists. The most recent scores were used. Patients were divided into four groups according the UPDRS item 1 (intellectual impairment): A) no dementia, score 0; B) mild, 1; C) Moderate, 2; D) Severe, 3,4. The scores of rest action tremor (item 20, 21), and items 27 to 31 combined (arising, posture, gait, postural instability, bradykinesia) of Part III were assessed for each group. The differences among the groups were determined by analysis of variance.

### Results:

The average ages of PD patients were A) 70.7; B) 73.3; C) 77.9 and D) 77.7 years. Rest tremor scores were 1.3, 1.0, 0.8, 1.0; and action tremor scores were 1.0, 0.9, 0.8, 1.0, respectively. Only group A had a significantly higher rest tremor than group B and C. The combined items 27 to 31 scored 5.7, 6.8, 9.2, 11.8, respectively. They were significantly different between each group and correlated with the mentation scores.

### Unified Parkinson's Disease Rating Scale (UPDRS)

#### 1. MENTATION (PART I) (0-4)

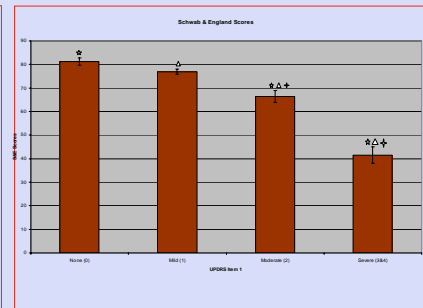
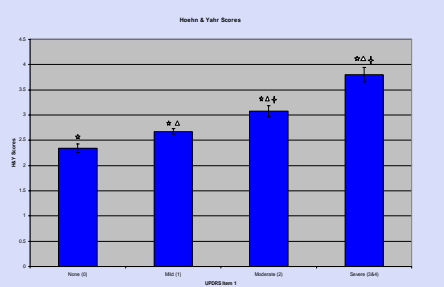
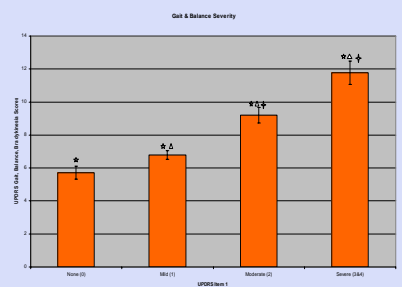
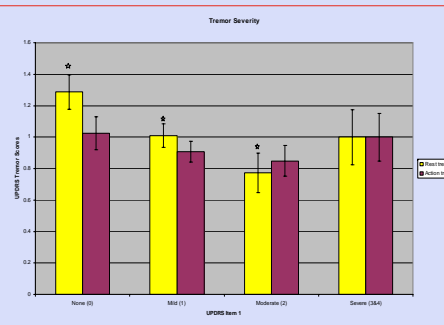
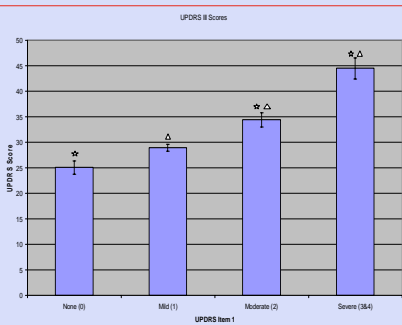
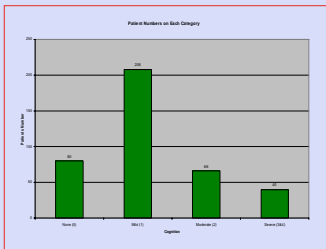
1. Intellectual impairment
0. None
1. Mild impairment (patients with mild impairment of memory and/or other intellectual)
2. Moderate impairment (patients with moderate and/or other intellectual impairment) (patients with moderate impairment of function at home with mild impairment)
3. Severe impairment (patients with severe impairment of function at home with moderate impairment)
4. Extreme impairment (patients with extreme impairment of function at home with severe impairment)

#### 2. MOTOR (PART II) (0-4)

0. None
1. Mild impairment (patients with mild impairment of memory and/or other intellectual)
2. Moderate impairment (patients with moderate and/or other intellectual impairment) (patients with moderate impairment of function at home with mild impairment)
3. Severe impairment (patients with severe impairment of function at home with moderate impairment)
4. Extreme impairment (patients with extreme impairment of function at home with severe impairment)

#### 3. GAIT (PART III) (0-12)

0. None
1. Mild impairment (patients with mild impairment of memory and/or other intellectual)
2. Moderate impairment (patients with moderate and/or other intellectual impairment) (patients with moderate impairment of function at home with mild impairment)
3. Severe impairment (patients with severe impairment of function at home with moderate impairment)
4. Extreme impairment (patients with extreme impairment of function at home with severe impairment)



- ☆ Compared to None (0) group. P < 0.05
- △ Compared to Mild (1) group. P < 0.05
- ✦ Compared to Moderate (2) group. P < 0.05

### CONCLUSION:

Our results demonstrate that UPDRS item 1 scores correlate well with UPDRS motor scores (Part III) and gait/balance functions of PD patients. Tremors, on the other hand, correlate less well with cognitive impairment, though there is a trend of increased tremor in patients with no dementia. UPDRS remains a useful tool in evaluating psychiatric and motor aspects of PD patients.

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