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Neuroscience
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ABSTRACTS

have not been compared with clinical rating scales of ET, such as the TETRAS.

Methods: Patients sequentially evaluated and diagnosed with ET at the Parkinson's Disease Center and Movement Disorders Clinic, Baylor College of Medicine were enrolled in the study. The Kinesia portable device was attached to the wrist and subjects were instructed to hold their arms in an outstretched position and then touch their nose while data were wirelessly transmitted to a computer. Subjects were rated on the arm where the system was placed using specific TETRAS items. A linear regression model was constructed for both tasks using the logarithmic values of the clinical scores and the objective motion data parameters to compute a Kinesia score.

Results: Twenty subjects underwent complete clinical TETRAS and Kinesia quantitative assessments. The mean age of enrolled patients was 62.03 ± 12.95 years. The mean scores of TETRAS items for postural and kinetic tremor were 1.93 ± 0.82 and 2 ± 0.76 , respectively. TETRAS clinical scores significantly correlated with predicted Kinesia quantitative variables for postural ($r = 0.738$; $p < 0.001$) and kinetic ($r_s = 0.6$; $p = 0.005$) tremor.

Conclusions: Tremor measurements generated by Kinesia correlate with TETRAS clinical scores. The system may have a utility in quantitative assessments of ET when combined with standard clinical assessment.

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PILOCARPINE-INDUCED MYOTIC RESPONSE IS GREATER IN PD THAN IN MSA PATIENTS

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Objective: To evaluate the basal pupil diameter and the amplitude of response to pilocarpine in patients with Parkinson's Disease (PD), patients with Multiple System Atrophy (MSA) and healthy controls. PD patients often complain of visual disturbances. Only few studies have evaluated ocular dysautonomias in PD patients and, to our knowledge, no studies have compared the pupil response to pilocarpine between PD and MSA patients.

Methods: Pupil diameter was assessed using an infrared videocamera in darkness. Dilute pilocarpine (0.143%) was administered in one eye. The pupil diameter was recorded at baseline and every 15 minutes up to 60 minutes. The diameters of the pupil were blindly measured on the PC display. The pupil response was quantified by the percentage of the following ratio: $(D2-D1) \times 100/D1$, where D1 and D2 represent the baseline diameter and the minimum drug-treated diameter, respectively.

Results: We evaluated 11 PD patients (8 males and 3 females, mean age 57.6 ± 6.7 y), 10 MSA patients (7 males and 3 females, mean age 57.5 ± 9.15 y) and 10 control subjects (7 males and 3 females, age 65.2 ± 12.46 y). The myotic response to 0.142% pilocarpine administration was significantly greater in PD patients (49.6 ± 10.4) than in MSA (31.8 ± 13.6 , p value 0.004) and control subjects (39.9 ± 8.8 , p value 0.04). In addition, the basal pupil diameter in darkness was significantly greater in PD group (52.3 ± 7.0) than in both MSA (45.1 ± 6.9 , p value 0.04) and healthy subjects (42.7 ± 6.78 , p value

0.01).

Discussion: These data suggest a pupil postganglionic autonomic dysfunction in Parkinson's disease. Pilocarpine-induced myotic response can represent a useful tool to distinguish between PD and MSA.

TEMPERAMENT TRAITS IN PARKINSON'S DISEASE: A POSSIBLE PREDICTIVE FACTOR OF MOOD DISORDERS?

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Objectives: Apathy, defined as lack of motivation, and depression are common conditions in Parkinson disease (PD) occurring in about 20%–40% of patients. According to the biosocial model of personality, parkinsonian patients generally present a greater "harm-avoidance" (HA) trait characterized by the tendency toward an inhibitory response to signals of aversive stimuli that lead to avoidance of punishment and non-reward. Personality traits in PD may influence many aspects of normal and pathological behaviours.

Methods: Forty-seven PD patients (18 women and 29 men with a mean age of 59.8 ± 10.6 years and the mean disease duration of 5.7 ± 4.4 years) were enrolled in the study. PD patients with cognitive impairment were excluded from the study. Temperament trait was evaluated using the "Temperament and Character Inventory" (TCI). Hamilton Depression Rating Scale (Ham-D) and the Apathy Evaluation Scale (AES) were administered to all the enrolled subjects to evaluate the presence of depression and apathy. Clinical and pharmacological data were also recorded using a standardized questionnaire.

Results: Depression was found in 24 (51.1%) patients while apathy was recorded in 11 patients (23.4%). Concerning the temperament trait the mean score for HA was 70.9 ± 26.7 . HA score was significantly higher among PD patients with depression respect to those without depression (82.8 ± 20.5 versus 59.0 ± 27.3 ; $p = 0.002$). We have also found a greater, even if not significant, HA score among subjects with apathy respect to those without apathy (82.7 ± 16.6 versus 67.6 ± 28.2 ; $p = 0.1$); both AES and Ham-D scores significantly correlate with HA score (Spearman's rho -0.36 ; $p = 0.01$ and Spearman's rho 0.42 ; $p = 0.003$ respectively).

Discussion: According to our data it could be hypothesized that temperament traits could predict and influence mood disorders in PD.

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ACCELEROMETRIC GAIT ANALYSIS AMONG PARKINSON DISEASE AFTER AN ADAPTED MOTOR ACTIVITY

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Objective: To demonstrate whether or not objective differences are detectable in average accelerations, obtained with a triaxial accelero-