

## RT 1.07

### How choroidal thickness is related with Parkinson's disease? A case control study

*A. Fatima*<sup>1</sup>

<sup>1</sup>Fatima Jinnah Medical University/Sir Gangaram Hospital, Neurology, Lahore, Pakistan

**Background:** Parkinson's disease (PD) is a neurodegenerative disorder that leads to the selective loss of dopaminergic neurons substantia nigra pars compacta (SNc).. The clinical manifestations include movement alterations as well as non-motor symptoms, such as dementia, depression, and autonomic dysfunction. MRI assessment feature high iron accumulation. Recently it has been observed that PD affects the retina. Our study aims to find the retinal alterations in PD and their association to clinical and SNc iron-related imaging metrics.

**Methods:** A case control study was conducted and fifteen patients were included in the study. The patients underwent enhanced depth imaging optical coherence tomography evaluation. Choroidal (vascular) thickness and nerve layers were measured in 4 subregions [superior, inferior, temporal and nasal] and at 3 foveal distances (1, 1.5, and 3mm).

For significantly different metrics, their associations with clinical [levodopa equivalent daily dosage (LEDD), motor and visuospatial function] and SNc susceptibility MRI metrics [R2\* and quantitative susceptibility mapping (QSM)] were explored.

**Results:** Compared to control participants, PD participants had a thicker choroid ( $p = 0.005$ ), but no changes in nerve layers. Higher mean choroidal thickness was associated with lower LEDD ( $p < 0.01$ ) and better visuospatial function ( $p < 0.05$ ). Subregion analyses revealed higher choroidal thickness correlated with lower LEDD and better motor and visuospatial measures. Higher mean choroidal thickness also was associated with lower nigral iron MRI ( $p < 0.05$ ).

**Conclusions:** The choroid in PD may present increased thickness with better clinical performance and less nigral pathology. compared to healthy individuals; however, more studies and histological analysis are needed to corroborate our findings.

## RT 1.08

### Correlation of hypothalamic-pituitary adrenal disorders with cognitive impairment in Parkinsons disease and vascular parkinsonism

*D. Akramova*<sup>1</sup>, *G. Rakhimbaeva*<sup>1</sup>, *T. Bobomuratov*<sup>1</sup>, *S. Kuranbaeva*<sup>1</sup>

<sup>1</sup>Tashkent Medical Academy, Tashkent, Uzbekistan

**Background:** The clinical features of Parkinson's disease and vascular parkinsonism, cognitive disorders associated with the disease, neuroimaging in Parkinson's disease and vascular parkinsonism, as well as intracranial vascular lesions, elevated serum cortisol levels and serum alpha-fetoprotein alterations are therefore discussed.

**Methods:** Based on this study, the results of a comprehensive clinical examination of 87 patients were analyzed. Research work was carried out on the basis of the TMA clinic in 2019-2022 years 47 patients with Parkinson's disease (PD) and 40 patients with vascular Parkinsonism (VP). For study hypothalamic-pituitary adrenal disorders we studied the association of cortisol and alpha-fetoprotein (AFP) levels in morning serum. Cognitive status and mental status of patients was assessed by the following tests: Mini-Mental State Examination (MMSE), Montreal Cognitive Assessment-(MoCA test).

**Results:** The main statistical changes when examining morning serum cortisol in patients were observed in the group of patients with VP, with a mean cortisol value of  $264.6 \pm 66.4$ . The correlation with cognitive impairment on the MMSE scale was  $r = -0.79$   $p < 0.01$ , and the correlation with the MoCA test and cognitive impairment was  $r = -0.77$   $p < 0.01$ . It was also noted that AFP concentrations in group two patients significantly increased compared to group one patients and practically healthy patients with an increase of  $15.3 \pm 3.7$ . and the correlation of cognitive impairment with the MMSE scale was  $r = -0.80$   $p < 0.01$ , and the correlation of the MoCA test with cognitive impairment was  $r = -0.79$   $p < 0.01$ . Group 2 patients showed a significant increase in blood sugar levels,  $p < 0.01$ . On the Beck scale, the presence of severe moderate depression was observed at 72.5%  $p < 0.01$ . Elevated blood pressure was also dominant in group 2 compared to group 1 and 3 patients. In analysis by neuropsychological scales, it was noted that the overall MMSE scores in the VP patient group were in the range of 2 clearly marked cognitive impairment, while the MoCA test also showed a statistically significant change in clearly marked cognitive impairment. Cognitive impairment was observed in 72.5% of VP patients with  $p < 0.01$ .

**Conclusions:** In Parkinson's disease and vascular parkinsonism, there is a significant increase in serum cortisol and alpha-fetoprotein ( $p < 0.05$ ), as well as an increase in the rate of cognitive impairment, that is, the amount of cortisol and the degree of cognitive impairment correlate.

## RT 1.09

### Sarcopenia in acute ischemic stroke patients and patients with Parkinson's disease

*S. Mandjikoska<sup>1</sup>, G. Horvat Pinterić*

<sup>1</sup>University Clinical Center in Maribor, Department of Neurology, Maribor, Slovenia

**Background:** Sarcopenia is a condition characterized by a progressive generalized loss of skeletal muscle mass and strength. The most common nutritional problem that predisposes an ischemic stroke (IS) is sarcopenia. In patients with Parkinson's disease (PD), sarcopenia may represent the common downstream pathway that, from motor and non-motor symptoms leads to the progressive loss of resilience, frailty, and disability.

**Methods:** Clinical tests and bioimpedance analyses were used to recognize malnourished patients. We chose the Jansen's formula to calculate the total skeletal muscle mass index (TSMMi) and Cruz-Jentoft's cut-off values to identify sarcopenia.

**Results:** The nutritional status was performed on 123 patients, of which 72 were with moderate IS (NIHSS 9-15) in acute phase (<7days) and 51 with PD, 47% were women and 53% were men. Their average age was 71.6 years. The average BMI was 27.6 kg/m<sup>2</sup> (21.0–35.4) in women and 27.9 kg/m<sup>2</sup> (20.8–44.4) in men