Clinical and imaging characteristics of atypical parkinsonism: Case series

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Background & Aim: Atypical parkinsonism, accounts for 0.2 to 1.5% of all cases with probable Parkinson's disease and its subtypes are Progressive Supranuclear Palsy (PSP); Multiple Systems Atrophy (MSA), Dementia with Lewy Bodies (DLB) and Cortico Basal Degeneration (CBD); they share clinical presentation and have a poor response to Levodopa. We aimed to investigate the main clinical and imaging characteristics of these diagnostic entities.

Method: 22 patients collected from the dementia laboratory of the National Institute of Neurology and Neurosurgery database were included, from August 2016 to June 2017; 9 PSP, 7 CBD, 3 with DLB and 3 with MSA patients. We report clinical, structural (visual scales - CGA, MTA, Fazekas, Koedam and strategic infarcts) and FDG-PET findings (18F-FDG/DTBZ).

Result: Mean ages of onset was: CBD=54.1, PSP=63.4, DLB=70.3, MSA=56 years. Mean delay on diagnosis in years were: CBD=2.1; PSP=1.2, DLB=1.3 and AMS=3.3. Initial symptoms were: Stiffness and alteration of episodic memory in CBD; postural instability with falls and stiffness on PSP; complex visual hallucinations and behavioral disorder related to REM sleep on DLB; dysarthria and falls on MSA.

Conclusion & Discussion: We must suspect an atypical parkinsonism diagnosis when disease onset is between 50–60 year, starting with falls, gait disturbances, working and episodic memory impairment, stiffness and dysarthria. Marked asymmetry and cortical thickness and metabolism are the hallmark on CBD radiological findings. Humming bird and hot cross bun signs are the main characteristics found on MRI in PSP and MSA. On BLD the preserved image on MRI and the functional studies.