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Thursday

Neuropathology of Protracted Course-Progressive Supranuclear Palsy (PC-PSP)

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State-of-the-art: Progressive Supranuclear Palsy (PSP) encompasses a broader range of disease courses than previously appreciated. The most frequent clinical presentations of PSP are Richardson's Syndrome (RS) and PSP with a predominant Parkinsonism phenotype (PSP-P). Time to reach gait dependence and cognitive impairment have been proposed as prognostic disease milestones. Genetic polymorphisms in *TRIM11* and *SLC2A13* genes have been associated with longer disease duration (DD).
Methodology: Retrospective chart review, genetic single nucleotide polymorphism (SNP) analyses (in 3 cases), and neuropathology (5 cases).
Results: We identified five cases with long (>10-15 years) or very long (>15 years) DD. Stage 1/6 PSP tau pathology was present in 2 cases (one PSP-P and one undifferentiated phenotype), whereas pallido-nigro-Luysian atrophy (PSP-RS), stage 4/6 (PSP-P) PSP pathology, and novel limbic-predominant neuronal inclusion body 4-repeat tauopathy with overlapping features of PSP pathology was found in the other 3 cases. Three cases were homozygous for the rs564309-C allele in the *TRIM11* gene and the H1 *MAPT* haplotype. Two were heterozygous for rs2242367 (G/A) in *SLC2A13*, while the third was homozygous for the G-allele.
Conclusions: The concept of PC-PSP includes cases with long DD combined with slow clinical progression and either a low burden of anatomically restricted tau pathology or atypical forms of PSP pathology. Understanding of the assortment of tau morphologies may help explain some of the phenotypic heterogeneity seen in PSP and help to unravel the clinicopathological phenotypes associated with PC-PSP.

Conflicts of interest

None