URIC ACID AS A POTENTIAL DISEASE MODIFIER IN PATIENTS WITH MULTIPLE SYSTEM ATROPHY

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Background: Recent studies have suggested that mitochondrial dysfunction and oxidative stress play a key role in the pathogenesis of multiple system atrophy.

Methods: We evaluated the influence of serum uric acid levels on disease progression in 53 patients with multiple system atrophy using changes in the annualized unified multiple system atrophy rating scale scores.

Results: The mean annualized unified multiple system atrophy rating scale changes were significantly lower in patients with the highest uric acid quartile compared with those with the lowest quartile (8.4 ± 5.1 vs 20.2 ± 16.0, p=0.038). Serum uric acid levels had a significant negative correlation with the annualized unified multiple system atrophy rating scale changes (r=-0.40, p=0.004). Multiple linear regression analysis showed that only serum uric acid concentration was significantly correlated with the annualized unified multiple system atrophy rating scale changes (β=-2.687, p=0.011).

Conclusions: These data suggest that serum uric acid may act as a potential disease modifier in multiple system atrophy.