

Supplementary Audio S1. Audio sample of sustained phonation, syllable repetition and reading passage of representative patient with progressive supranuclear palsy (Richardson syndrome, male, 69 years, and symptom duration 3 years).

Supplementary Audio S2. Audio sample of sustained phonation, syllable repetition and reading passage of representative patient with multiple system atrophy (parkinsonian subtype female, 67 years, and symptom duration 5 years).

Supplementary Audio S3. Audio sample of sustained phonation, syllable repetition and reading passage of representative patient with Parkinson's disease (male, 63 years, and symptom duration 5 years)

Supplementary Audio S4. Audio sample of sustained phonation, syllable repetition and reading passage of representative healthy control subject (male and 65 years).