DISEASE SUMMARIES and SYMPTOMS *at a glance*

Multiple System Atrophy (MSA)

MSA is a terminal degenerative neurological condition. The difficulty in diagnosing MSA has led to the creation of red flags to act as warning signs that may raise clinical suspicion of MSA.

- Rare neurodegenerative disease that affects multiple systems, particularly motor and autonomic nervous systems
- First described in the 1960s as Shy-Drager syndrome
- Pathologically classified as a synucleinopathy (accumulation of the protein alpha synuclein)
- Subclassified by three core clinical features:
  MSA-P (Parkinsonian) – striatonigral degeneration implies Parkinsonism with some degree of cerebellar dysfunction
  MSA-A (autonomic) – Shy-Drager syndrome reflects a predominance of autonomic failure
  MSA-C (cerebellar) – olivopontocerebellar atrophy indicates primarily cerebellar defects with minor degrees of parkinsonism
- Three to four cases per 100,000 people
- Average age of onset is usually after 50 years
- More common in men
- Life expectancy is seven to 10 years following symptom onset
- No cure or medications to slow disease progress

Signs and Symptoms

- Rigidity
- Action tremor – irregular, jerky, myoclonic movements
- Bradykinesia
- Freezing of gait
- Early postural instability and falls
- Orthostatic hypotension
- Erectile dysfunction
- Bladder dysfunction: urgency, frequency, incontinence
- Constipation
- Speech and swallow difficulties – mixed dysarthria tends to emerge earlier in MSA than PD, is more severe, and deteriorates more rapidly
- REM Behavioral Disorder (RBD) – acting out dreams while sleeping due to lack of atonia
- Gait and limb ataxia

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