

MANAGEMENT OF AMBULATORY DYSFUNCTION IN MS

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Ambulatory Dysfunction in MS

Epidemiology

- One of the most disabling and common effects of MS
- Rated as the most important function by the largest proportion of people with MS
- Approximately 75% of people with MS have clinically significant walking disturbance
- Advancement of walking disability is a hallmark of progressive MS

Features

- Reduced speed
- Increased energy consumption
- Altered mechanics due to weakness
 - Foot drop
 - Circumduction/hip hiking/steppage gait
 - Genu recurvatum
- Altered mechanics due to spasticity
 - Scissoring
 - Toe walking
- Ataxia
- Falls

Medication treatment options

Dalfampridine (Ampyra)

- FDA Approved to improve walking in MS
- 10mg q 12 hours
- Based on two phase III studies demonstrating:
 - About 35% were responders
 - About 25% faster walking in responders
 - More responders in the treated group than in the placebo group
- Responder = consistently faster T25FW during on-treatment assessments compared to off-treatment assessments

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Off-label use of medications for ambulatory dysfunction in MS

- Antispasticity drugs
 - Baclofen
 - Tizanidine
 - Botulinum toxin
- ?methylphenidate

Rehabilitation treatment options

Exercise

Associated with significant improvements in:

- Walking speed – 10 meter walk test
- Walking endurance – 2 and 6 minute walk tests
- Stretching for spasticity

Assistive devices

- Selection
 - Comfort
 - Safety
 - Try out lots of different ones
 - Have a range available for different circumstances
- Fitting
- Training
 - Progressive task-based training may prevent falls, increase device satisfaction, increase walking and decrease sitting

Bracing – for foot drop

- May also improve genu recurvatum
 - Ankle foot orthosis - AFO
 - Functional electrical stimulation - FES

Summary

Ambulatory dysfunction in MS is common and has many causes

- Interventions include:
 - Medications
 - Rehabilitation
 - Exercise
 - Assistive devices
 - Bracing

It's not one problem with one solution!

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