

Case 3 – Case and Answer Key**Orthotics Case**

Ms. M

A 60 year old woman with secondary progressive MS and leg weakness referred to your clinic to see if there are any orthotic device/s that would help her with her concerns. Her problem is that when walking her right foot catches and her left ankle feels unstable both of which are causing her to occasionally fall.

What else do you want to find out on history?

Discuss as a group and when ready go to the next section.

Case 3 – Case and Answer Key**Information obtained on history:**

-When was MS diagnosed?

25 years ago

-Have you had orthotic devices before?

20 years ago received bilateral AFOs – uncomfortable, never adjusted, never used them

Left WalkAide (peroneal nerve stimulator) 10 years ago – helpful but at the time her fatigue was very bad so rarely used

-Do you use a gait aid?

Uses 4WW at all times – outdoor walker with all terrain wheels and indoor walker

-Where do you walk? How much do you walk?

Walks long distances on rough ground (hikes) on a daily basis

-Why type of shoes do you wear?

Wears lightweight high top hiking boots at all times

-Other medical problems?

Breast cancer (over ten years ago)

-Funding for orthoses?

Extended health care (same as before and WalkAide funded before)

Given this information what do you want to do on physical exam?

Discuss as a group and when ready go to the next section.

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Information obtained from physical exam:

-Watch her walk!

Slow with 4WW

Bilateral toe drag in early swing phase (worse on right) but then clears feet and makes initial contact with heels and progresses to flat foot (very fast progression on left but normal on the right)

-Do passive ROM (contracture could be a key issues with longstanding weakness that has not been graded)

Passive LE ROM normal

-Check tone

Normal

-Check sensation

LT sense normal

-LE strength exam

Hips:

R HF grade 1, L HF grade 2, B HE/Ab/Ad grade 4

Knees:

B KE grade 5, B KF grade 4

Ankles:

R DF 4, PF/In/Ev 4+

L DF 2, PF/In/Ev 4-

What type of device/s could be considered and why?

Discuss as a group and when ready go to the next section.

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Devices:

Right side – no orthosis. The reason that she catches her toe is hip flexion weakness. Even though there is a small amount of weakness in her right ankle it is not why she catches her toe and the weight of an AFO (even though small) will make hip flexion even more challenging.

Left side – An orthosis to manage ankle weakness should help. Options – peroneal nerve stimulator (BioNess) as it worked in the past, Thermoplastic flexible AFO or Carbon fiber AFO (no need for joints given her choice of footwear (boots) and want to keep lightweight.

How are these devices funded (or not funded) in your province?

Discuss as a group to share insights. Remember that often the reason that you make a particular choice is based on funding which is not necessarily the same from one province/territory to the next.

Be prepared to share your answers with the larger group

References:

1. 13th CAPM&R Comprehensive Review Course Notes
2. Chui KK, Jorge M, Yen SC, Lusardi MM (eds). Orthotics and Prosthetics in Rehabilitation, 4th ed. 2020. Elsevier, St. Louis.
3. Webster JB, Murphy DP (eds). Atlas of Orthoses and Assistive Devices, 5th ed. 2019. Elsevier, Philadelphia, PA.