

## **WALKING- BASED OUTCOME MEASURES FOR ASSESSMENT OF THE IMPROVEMENT AFTER MULTIPLE SCLEROSIS RELAPSES**

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Background: Reduced walking speed is an important feature of Multiple Sclerosis (MS) relapse. However, it is not well established the recovery of walking after the relapse.

Goals: To examine the recovery dynamics of walking ability in MS patients during 3 month period after relapse.

Methods: 25 patients with relapsing-remitting MS have been recruited from April 2010. 4 patients had 2 relapses during the study, so altogether 29 relapses have been assessed. They were evaluated with Disability Status Scale (EDSS), 6 Minute Walk Test (6MWT) and Multiple Sclerosis Walking Scale (MSWS). All relapses were treated with 5 g of i/v methylprednisolone (IVMP). Walking parameters were recorded during relapse, after the first IVMP drip, after the last IVMP drip, 1 month and 3 months after the relapse.

Results: EDSS scores improved in 1 month ( $p=0,0023$ ) and 3 months ( $p=0,0118$ ) after relapse. Statistically significant improvement was present in 6MWT after the 1st IVMP drip 6,5% ( $p<0,0001$ ) compared to relapse. Improvement up to 9% was recorded after 5th IVMP drip 9% ( $p=0,0001$ ) that was unchanged on later follow up visits. Improvement was also shown comparing MSWS during relapse and after the 5th IVMP drip 20% ( $p<0,0001$ ). Similarly the MSWS remained unchanged on further follow up.

Conclusions: Statistically significant improvement after relapse was seen with 6MWT already after the 1st IVMP drip and was sustained in 3 months follow up. 20% of improvement on MSWS was demonstrated after 5th IVMP and was sustained in 3 months.