



Faculty of Medical Sciences, Ss. Cyril and Methodius University, Shkop, Macedonia

# NEUROREHABILITATION IN MULTIPLE SCLEROSIS

Marija Trajkova

Ass. Prof. Danche Vasileva, PhD

Multiple sclerosis is a chronic and progressive neurological illness which is characterized with demyelization in the white mass of the brain, and with wide and variable spectrum of the neurologic signs.

## OBJECTIVE

The goal of the study is to follow through the influence of the applied neurorehabilitation on a patient with chronic progressive form of multiple sclerosis.

## SOURCES AND METHODS

The study was conducted on a 42 years old female patient with a chronic – progressive form of multiple sclerosis in a timeline of one month in domestic conditions.

Medications prescribed by a neurologist include corticosteroids-Methylprednisolone and Interferon beta 1a- Avaxone, and they have been used successfully for reduction of the frequency and the weight of the relapses. Kinesitherapy was performed 3 times a week, one hour each time, moderate intensiveness of the stress, more breaks between the exercises, without getting the level of exhaustion.

The patient was correctly placed in bed, and in sitting position, passive – active exercises, analytical exercises for upper and lower extremities, breathing exercises, balance and coordination exercises by sitting and standing and massage treatments were carried out. To assess the effect of the therapy we have used **Berg's balance scale**, and **Transfer tests** (changing over from occipital laying position to left/right laying position, from occipital laying position to standing position). The test: **Five Times Sit-To- Stand (FTSST)** is suitable for evaluating the abilities of transfer. The changes in the motor activity are monitored twice after discharging from hospital in domestic rehabilitation conditions.

## RESULTS AND DISCUSSION

The **Transfer tests** (changing over from occipital laying position to left/right laying position, from occipital laying position to standing position) show an improvement of the speed in the reaction and the muscle force of the patient, which is due to the systematically conveyed procedures in kinesitherapy and the included exercises for gaining strenght in the lower extremities and the abdominal muscles.

The result from the **Five Times Sit-To- Stand Test (FTSST)** is significantly improved, thanks to the increased power of the lower extremities which is a great step towards the self sufficiency of the patient. The correct position of the thorax and the velocity of the movement are of crucial importance. The coordination and consecutiveness of the movements between the thorax and the lower extremities are evaluated with this test. The improvement of this parameter is due to the described means of kinesitherapy.



## CONCLUSION

Neurorehabilitation has shown an effective and positive influence to the decreasing of these symptoms through the improvement of the functional performances and the independence of the patient.

There hasn't been a suitable cure which would stop the process of demyelization, which has brought to invalidity of patients in the years of their highest activity and productiveness. The drugs and multi-disciplinary kinesitherapy have been shown as an effective combination in decreasing the relapses and decreasing the functional disability which contributes to the improvement of the quality of life.