

Significance of Early Mobility over Optimal Time Mobility

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ABOUT THE STUDY

Data from Lima, et al., 2022 address a question mark over the question of best window of time on Early Mobility (EM) to neurological patients in hospital environment. Besides research of last decade postulates 24-72 hours after stroke as the best window to EM, Lima, et al., 2022 has been show that this window can be enlarged and even though still have positive rehabilitation outcomes [1-6]. Authors put a light on a question that mobility protocol must consider patient's clinical stability since the neurological event, instead of being locked in a window of time. The 24-72 hours window predicts patient has had an immediate care from emergency treatments (Thrombectomy or tPA, tissue-type Plasminogen Activator) and has been seen by an interdisciplinary team and monitored in Stroke Care Units. This reality might be not easily reached in most countries with emerging economies as the BRICS (Brazil, Russia, India, China and South Africa) those have a public health care system not aligned with updated literature guidelines.

An EM program might mitigate unfavorable issues related to bed rest, demonstrating effectiveness in improving functionality during hospital stay. Neurological Early Mobility Protocol (NEMP) was idealized to help the multidisciplinary team to prevent immobility complications, and in the case of physiotherapists, to program their rehabilitation approaches according to the patient's functional status. The recent American Physical Therapy Association (2022) selected the 6 core tasks that should be assessed by a physiotherapist before treatment, considering the performance of these specific activities: sitting, sit-to-stand, and standing, step up/step down, walk and turn, and reach/grasp/manipulate. All NEMP exercises had been based in these 6 core tasks with the aim to facilitate independence during hospital time [7].

The principal structure of NEMP has four distinct phases considering: independence in bed activities (Phase I), reach sitting position (Phase II), orthostatic (phase III) and walking (phase IV) [1]. In all these phases, NEMP offer sections those work on guidelines of health care (section A), positioning care (section B), mobilizations of upper and lower limbs (section C), mobility training in bed (section D), mobility training out of bed (section E) and walking practice (section F).

In section A, body position care is recommended in NEMP to prevent lack of range of motion, contractures and deformities, since weakness, hypotonia, hypertonia and joint instability are common in hospital neurological patients [8]. In this section we also consider the guidelines from EPUAP/NPUAP/PPPIAP (2019) about pressure ulcers prevention: we prescribe changes in body position in each two hours, maintenance of bed headboard in 30° (higher degrees can increase pressure in bony prominences) and push up strategies for pressure relief during sitting position [9,10]. Section A as well as section B (positioning care) explores a multidisciplinary approach as early mobility has been seen as an integrative intervention in hospital care [11].

Section C in NEMP aims to promote mobilizations in upper and lower limbs as well as scapula and pelvis, maintaining articular integrity and facilitating basic daily activities.

Approaches as sitting balance exercises proposed by NEMP in Section D receives Level 1 of recommendation in KNGF guideline (2014) Especially in phase II, patients experience sitting balance by means of reaching and other strategies that facilitates awareness of their own body position [12]. Trunk control is a predictive factor for assuming independence in walking (TWIST algorithm) and for functional prognostics 90 days after Hospital Discharge in patients with stroke [13]. These predictive factors indicate that physiotherapists might consider trunk stabilizers as important protagonists to be included in the activity rehabilitation protocol [14].

Antigravity muscles of trunk and lower limbs are essential to achieve independence in sitting to stand transition, orthostatic, and walking training (activities from Sections E and F of the NEMP). Among all inpatient recovery goals, improve walking activity is often expressed by patients with stroke. In line with this aim, training of static and dynamic balance and gait program are offered in NEMP since Phase I and these exercises receive Recommendation I-A, according to the 2022 Brazilian Neurological Guideline for Stroke Rehabilitation and AHA STROKE guidelines 2016, 2019 [3,8]. As the main goal is to reach the standing position as early as possible, training for standing position is focused since Phase I in each therapy day, varying the way of reaching it as well passively, assisted or an independent way.

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Before starting NEMP, the physiotherapists assess clinical conditions of patients to ensure minimal adverse events. NEMP has well defined criteria of inclusion, exclusion and interruption of protocol that must be analyzed before starting treatment. In the present commentary we add an important consideration in cases that the patient has one of the exclusion criteria established in NEMP. Treatment will progress according to the 2014-KNGF guideline (the pre-mobilization phase), that consist of advising, monitoring, recommending the ideal body position in the bed, programs for changes in body position, and respiratory airway care, when necessary [10]. In NEMP, we also recommend upper and lower limbs mobilizations in bed for this group of patients.

In our paper, the transcription of HPMQ into ICF performance qualifier could offer an analysis of the extent of the problems that might be observed during the performance of the hospital activities. We observed a similar transcription [13]. Study that transposed the five possible scores of the Medical Research Council into generic scale. Otherwise, use a mathematic formula to recode the Stroke Specific Quality of Life (SS-QOL) into ICF generic scale subtracting the expected score of SS-QOL with the obtained, multiplied by 100 and divided by the maximum expected score. The resulted percentage indicates the extent of the problem according to the generic scale. Using the transcription of scales into ICF might help the standardization of language, facilitating the comparison of data and qualifying the obtained score into the respective ICF component [14].

CONCLUSION

NEMP structure is in accordance with the recent literature about early mobilization and rehabilitation of acute neurological diseases and has been useful to improve patient's activity level during hospital stay, even beginning after the preconized period set down in literature (24-72 h of symptoms). We suggest NEMP might be a guide for multidisciplinary team, especially physiotherapists that can be implemented through a detailed program of exercises based in function/structure and activities/participation components' of ICF.

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