
Evaluation of the patients in acute phase of neurorehabilitation – is there a problem?

Problemi procjene bolesnika u akutnoj fazi neurorehabilitacije

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Background: An early initiation of rehabilitation is essential and may lead to a better neurological outcome. A valid assessment of neurological early rehabilitation patients is difficult but it is necessary for setting the goals and to assess the efficacy of the treatment

Methods: We evaluated patients who were admitted and operated on at the Neurosurgery department University Medical Centre Ljubljana in the period from January 2017 till December 2017. We used five evaluation tools – Barthel index (BI), Berg Balance Scale (BBS), Extended Barthel Index (EBI), Visual Analogue Scale (VAS), and De Morton Mobility Index (DEMMI). The selection of the scale was dependent on the goal of rehabilitation and the patient's difficulties. The patients were evaluated at the beginning of the rehabilitation and at the discharge from the hospital. We monitored the results of the evaluation monthly; the final analysis was carried out for one year. The goal was to determine which of the available evaluation tools will be used the most.

Results: 239 patients were evaluated; the average number of the patients evaluated per month was 26 in the first six months. The average number of the evaluated patients in the last six month was lower – only 13 per month. Among five different assessing tools the most commonly used was BI (46.4%), then DEMMI (21.3%), VAS (20.5%), BBS (7.5%), and RBI (3%).

Discussion: Patients with severe neurological impairment require special early rehabilitation. These patients suffer from disorders of consciousness and functional dependence (1). Assessment is needed for planning – setting goals and for monitoring progress. A lot of well-designed and validated assessment tools are available. However, controversy still exists concerning which tool to use on which occasion. Obtaining complete information about patients' strengths and

weakness, defining precise goals and the time of assessment are important factors to consider. Assessment tools frequently used in early rehabilitation focus on consciousness/wakefulness, like Glasgow Coma Scale (2). This scale is widely used for diagnosis, clinical management and prognosis but does not provide the information for setting rehabilitation goals. Motor recovery can be documented with an impairment scale such as Ashworth's score for spasticity. Extensive evaluation, neuro motor testing and psychometric tests of cognitive functioning are difficult to complete in the early phase of rehabilitation because of pain, fatigue and lack of cooperation – these tests are generally used later on. Disability scales are used for assessing functional recovery, for setting goals and to monitor the efficacy of therapy.

The average length of stay in our acute hospital is six days. We start with rehabilitation procedures first day after admission or after operation. We wish to evaluate all patients with the aim to set the right goal which we could achieve while the patient is hospitalised. In our analysis the BI was the most frequently used scale regardless of the fact that the sensitivity of the BI is low when assessing severely impaired patients.

Very few patients were evaluated in a one year period; the reason could be that the available evaluation tools were inappropriate. The patients admitted at the Neurosurgery department have different problems; some of them are very complex so we have to be able to choose between the different evaluation scales and find the most appropriate one. On the other hand we can use only the assessment tools which have been translated into our language, so we are limited in the terms of selection

Conclusion: If we want to assess more patients in the early phase of neurorehabilitation, we should try to use some other assessment tools. The Early Functional Abilities Scale, with which we can assess activity of daily living and cognitive functioning (including wakefulness), allows monitoring of the neurosurgical early rehabilitation patients, but first an appropriate translation into the Slovenian language is required.

Key words: evaluation, neurorehabilitation, acute phase, assessment