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Updated measuring motor, sensory and sphincter dysfunctions in patients with cervical myelopathy using the modified Japanese Orthopedic Association (mJOA) score: a validation study

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Abstract:

Background: Cervical myelopathy population (CMP) is a common cause of significant clinical morbidity. This study aimed to translate and validate the modified Japanese Orthopedic Association score (mJOA) English version in Iran.

Methods: This was a prospective clinical validation study. Psychometric properties of the questionnaire were assessed using internal consistency; inter-observer reliability, discriminant validity, and responsiveness of the questionnaire to change.

Results: A total of 63 patients were studied. The mean mJOA score was 9.82 (SD = 1.0). Internal consistency of the mJOA as measured by Cronbach's alpha coefficient was satisfactory (alpha = 0.77). Inter-observer agreement as measured by Kappa statistics also was found to be acceptable (0.75). Known-groups comparison was performed to test discriminant validity and the findings indicated that the mJOA was able to differentiate between males and females and different age groups as expected (P less than 0.0001). Finally the questionnaire was found to be responsive to change as patients' pre- and post-operative scores on the mJOA (P less than 0.0001).

Conclusions: The Iranian version of mJOA performed well and the findings suggest that it is a reliable and valid measure of motor, sensory and sphincter dysfunctions among CMP patients.

Keywords:

Cervical myelopathy patients, Grading scale, Modified Japanese Orthopedic Association score

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