Modified Japanese Orthopaedic Association scale (mJOA)

This 18-point investigator-administered scale separately addresses motor dysfunction of the upper extremity (MDUE) and motor dysfunction of the lower extremity (MDLE), sensory loss of the upper extremity, and sphincter dysfunction (SD).

It was modified from the original Japanese Orthopaedic Association (JOA) scale proposed by Benzel et al\(^1\) to increase its applicability in the Western population.\(^2\) Some of the differences include that the modified scale has been translated into English and evaluates a patient’s ability to use Western cutlery rather than chopsticks. Although not well defined in the literature, the mJOA seems to be a multidimensional tool that assesses 3 key and distinct components (upper limb dysfunction, lower limb dysfunction, and bladder dysfunction) of cervical spondylotic myelopathy (CSM).

Yonenobu et al\(^3\) assessed the reliability of the JOA studying 29 patients with cervical myelopathy secondary to ossification of the posterior longitudinal ligament\(^4\). Both the inter- and intraobserver reliabilities were high (0.81 and 0.84, respectively), indicating that the JOA scale is a reasonable and valuable tool for the assessment of patients with cervical myelopathy. Because the differences between the JOA and mJOA are substantial, it cannot be assumed that the mJOA carries the same...
psychometric properties. Despite its widespread use, this instrument has never been subjected to rigorous evaluation of reliability, responsiveness, and validity.

The mJOA is an investigator-administered tool used to evaluate functional status in patients with CSM. Although it is one of the most frequently used outcome measures in existing CSM studies, its psychometric properties have never been determined. This limitation has prevented the adoption of the mJOA as the “gold standard” for assessing baseline severity and postoperative improvements in this patient population. In addition, it is challenging to translate current research efforts into clinical practice if conclusions are based on unvalidated outcome measures.

The modified Japanese Orthopaedic Association scale (mJOA) demonstrates both convergent and divergent validity and is responsive to change. These results validate existing studies and justify the use of this tool in further research efforts. Kopjar et al. hope this study will promote the global standardization of assessment tools and encourage clinicians to use the mJOA, alongside other ancillary measures, to evaluate functional status in patients with cervical spondylotic myelopathy (CSM).

The Minimum Clinically Important Difference (MCID) of the mJOA is estimated to be between 1 and 2 points and varies with myelopathy severity. This knowledge will enable clinicians to identify meaningful functional improvements in Degenerative Cervical Myelopathy (DCM) patients.

To facilitate global and cross-cultural comparisons of the severity of cervical myelopathy, a study presents a version of the mJOA scale that was translated into Portuguese and cross-culturally adapted for the Brazilian population.
