From the Japanese Orthopaedic Association

JOA Back Pain Evaluation Questionnaire (JOABPEQ)/
JOA Cervical Myelopathy Evaluation Questionnaire (JOACMEQ)
The report on the development of revised versions
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The Subcommittee of the Clinical Outcome Committee
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on Low Back Pain and Cervical Myelopathy Evaluation

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The aim of the revision and the story behind it

With the trend toward “consumer first” — and this trend applies to the medical community as well — the initiative has been shifting from supplier (e.g., physicians) to recipients (e.g., patients). Naturally, systems and elements in the medical field must also change according to this trend. Among them is the issue of evaluation systems for treatment results of various diseases.

First, those who ultimately evaluate the treatment results should be patients (patient-based). From the viewpoint of patients, diseases are not just pathological matters; they are dysfunctions caused by the disease, disabilities due to such dysfunctions, psychological problems due to such disabilities, and problems encountered in the course of social life. The problems patients suffer have multidimensional aspects. Therefore, it is expected that treatment results should be evaluated multidimensionally (multidimensional evaluation).

Evidence-based medicine requires the assumption of various scientifically based criteria. Given this background, the Japanese Orthopaedic Association (JOA) established the Clinical Outcome Committee on September 3, 1999 and decided to revise various criteria for the evaluation of treatment results. It requested its associated academic societies to revise the criteria related to the focus of each society.

On June 8, 2000, in response to this request, the Japanese Society for Spine Surgery and Related Research (JSSR) and the Japanese Society of Lumbar Spine Disorders jointly held the first working group meeting. Its aim was to revise the JOA scoring systems for cervical myelopathy or lumbar diseases of different severity. The equations to calculate the scores for disease severity were established based on this third investigation. To verify that the selected items have reproducibility, we conducted second-step surveys of 304 patients for cervical myelopathy and 350 patients for back pain. The surveys were repeated twice at a 4-week interval for cervical myelopathy and at a 2-week interval for back pain. As a result, the reproducibility of the questionnaire was verified.

2. Second investigation: verification of the reproducibility of the selected items

To verify that the selected items have reproducibility, we conducted second-step surveys of 304 patients for cervical myelopathy and 350 patients for back pain. The surveys were repeated twice at a 4-week interval for cervical myelopathy and at a 2-week interval for back pain. As a result, the reproducibility of the questionnaire was verified.

3. Third investigation: verification of the validity of the questionnaire and establishment of measurement scales

Using the items fixed at the second investigation, we administered the questionnaires to patients with cervical myelopathy or lumbar diseases of different severity to ensure their accuracy and responsiveness: 369 patients for cervical myelopathy and 452 patients for back pain. The equations to calculate the scores for disease severity were established based on this third investigation.

4. Fourth investigation: verification of the sensitivity of the functional scores for treatment results

To assess whether the finalized questionnaire can reflect the change in patients’ conditions after various treatments, we implemented the fourth investigation on 221 patients with cervical myelopathy and 313 patients with back pain (534 patients in total) who underwent surgery. The results indicated that the new evaluation questionnaire has high sensitivity for assessing treatment results.

We believe that the new evaluation questionnaire satisfies the requirements of the fundamental philosophy, “patient-based, multidimensional, and scientific.” However, even after undertaking the processes described above, some problems remain. Because QOL assessments are neither widely accepted nor have been used in Japan, we had to apply those used in other countries.