

Combining Patients Pain Scores Reports with Functionality Scales in Chronic Low Back Pain Patients

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Abstract : Background: While pain intensity scales remain generally accepted assessment tool, and the numeric pain rating score is highly subjective, we nevertheless rely on them to make a judgment about treatment effects. Misinterpretation of pain can lead practitioners to underestimate or overestimate the patient's medical condition. The purpose of this study was to analyze how the numeric rating pain scores given by patients with low back pain correlate with their functional activity levels. Methods: We included 100 consecutive patients with radicular low back pain (LBP) after the Institutional Review Board (IRB) approval. Pain scores, numeric rating scale (NRS) responses at rest and in the movement, Oswestry Disability Index (ODI) questionnaire answers were collected 10 times through 12 months. The ODI questionnaire is targeting a patient's activities and physical limitations as well as a patient's ability to manage stationary everyday duties. Statistical analysis was performed by using SPSS Software version 20. Results: The average duration of LBP was 14 ± 22 months at the beginning of the study. All patients included in the study were between 24 and 78 years old (average 48.85 ± 14); 56% women and 44% men. Differences between ODI and pain scores in the range from -10% to +10% were considered "normal". Discrepancies in pain scores were graded as mild between -30% and -11% or +11% and +30%; moderate between -50% and -31% and +31% and +50% and severe if differences were more than -50% or +50%. Our data showed that pain scores at rest correlate well with ODI in 65% of patients. In 30% of patients mild discrepancies were present (negative in 21% and positive in 9%), 4% of patients had moderate and 1% severe discrepancies. "Negative discrepancy" means that patients graded their pain scores much higher than their functional ability, and most likely exaggerated their pain. "Positive discrepancy" means that patients graded their pain scores much lower than their functional ability, and most likely underrated their pain. Comparisons between ODI and pain scores during movement showed normal correlation in only 39% of patients. Mild discrepancies were present in 42% (negative in 39% and positive in 3%); moderate in 14% (all negative), and severe in 5% (all negative) of patients. A 58% unknowingly exaggerated their pain during movement. Inconsistencies were equal in male and female patients ($p=0.606$ and $p=0.928$). Our results showed that there was a negative correlation between patients' satisfaction and the degree of reporting pain inconsistency. Furthermore, patients talking opioids showed more discrepancies in reporting pain intensity scores than did patients taking non-opioid analgesics or not taking medications for LBP ($p=0.038$). There was a highly statistically significant correlation between morphine equivalents doses and the level of discrepancy ($p<0.0001$). Conclusion: We have put emphasis on the patient education in pain evaluation as a vital step in accurate pain level reporting. We have showed a direct correlation with patients' satisfaction. Furthermore, we must identify other parameters in defining our patients' chronic pain conditions, such as functionality scales, quality of life questionnaires, etc., and should move away from an overly simplistic subjective rating scale.

Keywords : pain score, functionality scales, low back pain, lumbar

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