

Objectifying the Assessment of Pain

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Introduction/Purpose: Pain is a pervasive problem that accounts for a high percentage of referrals to health care providers including foot and ankle surgeons and is an important factor in narcotic addictions and their related deaths. Unfortunately, the analogue pain scores are determined by subjective (SUB) responses of the patient and fail to utilize objective criteria for making the assessments. In an attempt to resolve the subjectivity/objectivity concerns, we developed a scoring system that uses objective (OBJ) criteria based on three 0-to-10 scales. The measurements include the patients' requirements for analgesics, how the pain affects their levels of activity and how it affects their thought processes.

Methods: Over an 18 month period and as part of a physician pain management group's initial assessment of their patients, the study group was asked to rate their pain using the three SUB scales (Numerical Rating Scale, Visual Analogue Scale and Verbal Rating Scale) as well as our three OBJ scales. Each of our three OBJ (analgesics, activities and thought processes) scales used precise terms to quantify the numerical value for the scale. For example, the analgesics requirement ranged from no drug (0-points) to requirement for hospitalization for pain management (10-points). The activity scale ranged from no limitations (0-points) to pain noticed only with activity (4-points) to total limitation of activities (10-points). Analogous objective criteria were used for the third scale, how pain affects thought processes. Data analysis included patients' responses to the objective pain measurements as well as correlations between OBJ and SUB evaluation scoring systems.

Results: Data was collected prospectively on 109 patients. The mean scores (summation of the 3 SUB pain scales divided by 3 and doing likewise for the OBJ pain scales) was significantly higher for the SUB scores (6.4 vs. 4.2, $p < 0.001$). The lowest correlations between the SUB scores and each OBJ scale was with analgesic use ($r = .36$ vs. r 's = .53 for the other 2 OBJ scales). In general patients who scored highest on the SUB scores, preferred them to the OBJ measurements. Differences between the scores on the OBJ activity scale versus the OBJ thought processes scale helped distinguish pain of central versus peripheral origins. Ninety percent of patients completed the SUB plus OBJ scoring in less than 3 minutes.

Conclusion: Our OBJ Pain Score helped differentiate those patients who magnified their pain symptom from those who did not. Patients with higher scores on the thought processes scale would appear to be best managed by central nervous system acting drugs. Conversely those with higher OBJ activity scores would likely respond to peripheral acting agents such as non-steroidal analgesics, local injections or analgesic patches. In summary, our scoring system moves the evaluation of pain from subjective to objective. This has important ramifications for pain management, analgesic selection and avoidance of narcotic dependency.

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