HP0037 (2005)

SATISFACTORY IMPROVEMENT IN PAIN IS A FUNCTION OF BASELINE SEVERITY

P.M. ten Klooster[1], E. Taal [1] , K.W. Drossaers-Bakker [2] , M.A.F.J. van de Laar [2]

[1]Institute for Behavioural Research, University of Twente,
[2]Dept. of Rheumatology, Medisch Spectrum Twente, Enschede, Netherlands

Background: In recent years, assessing the patient"s perspective on changes in self-reported pain severity has received increasing attention. This has resulted in cut-off values for Visual Analogue Scale (VAS) change scores that represent meaningful reductions in pain. However, it remains unclear whether the size of required changes varies as a function of initial severity of pain and whether cut-offs should be presented as absolute or percentage change scores.

Objectives: To determine the Minimal Satisfactory Clinical Improvement (MSCI) on the VAS-pain and to further clarify the relationship between satisfactory improvements and baseline pain in rheumatic patients.

Methods: In a prospective inception cohort of patients visiting an outpatient rheumatology clinic in Enschede, 200 patients who were treated with a local corticosteroid injection were included. Prior to the local injection, and two weeks after the injection, patients completed a short questionnaire. At baseline current pain in the concerned joint or tendon was assessed on a 100-mm VAS. At follow-up the patients once again marked the VAS for current pain and judged the change in pain on a 5-point global rating scale. Optimal cut-off values for the absolute and relative MSCI were determined using Receiver Operating Characteristic (ROC) curves, with the patients" judgment of change as external criterion. Ratings of "satisfactory improvement" and "good to very good improvement" were pooled to define improved patients.

Results: Mean VAS-pain scores for the patients (71% female, mean age 60 years) at baseline and follow-up were 58.5 (± 24.6) and 30.0 (± 23.5). At follow-up 117 patients indicated improvement. A reduction of 30 mm or 55% on the two consecutive VASs performed best in correctly classifying improved and not-improved patients (see table). Relative improvements had higher accuracy for classifying patients. The linear relation of satisfactory improvements with baseline severity was confirmed by regression analysis. Patients with high baseline pain required significantly higher absolute reductions in pain to reach a satisfactory improvement (R^2=0.593, p=0.000). Although percentage change scores were also somewhat related to pretreatment pain (R^2=0.059, p=0.01), this biasing effect was much smaller.

Absolute and relative cut-off points for satisfactory improvement

	Accuracy	Cut-off point MCSI	Sensitivity	Specificity
Absolute improvement	0.788	30 mm	0.670	0.838
Relative improvement	0.856**	54.55%	0.732	0.912

** p<0.01 for difference between areas under the ROC curve.
** p<0.01 for difference between areas under the ROC curve.

Conclusions: The reduction in pain that a patient considers to be satisfactory is related to baseline pain severity and is not consistent throughout the range of the VAS. Cut-offs for patient perceived improvement should therefore be calculated as percentage changes. In this study a reduction in pain of approximately 55 percent performed best in identifying patients who consider themselves satisfactory improved.

Citation: Ann Rheum Dis, volume 64, supplement III, year 2005, page 593

Session: Patient centred health care