

To What Degree do Shoulder Outcome Instruments Reflect Patient's Psychological Distress?

Young Hak Roh MD, Jung Ho Noh MD, Joo Han Oh MD, Goo Hyun Baek MD, Hyun Sik Gong MD. *Clin Orthop Relat Res* (2012) 470:3470-3477

Overview

This article prospectively evaluates patients with chronic shoulder pain with a number of different shoulder outcome measures, and measures depression with a further two scales and a number of demographic and clinical measures.

The authors note that "Psychological distress contributes to symptom severity in patients" with a variety of musculoskeletal disorders. It is unclear whether psychological distress affects shoulder outcome measure results. The article aims to determine if the outcome measures do indicate psychological distress, and if those who are strongly affected by psychological distress can be identified.

Introduction

Chronic shoulder pain is a common problem, affecting 7-34% in the general population. Patient perceived disability correlates as much or more with psychological distress as objective measures. Pain anxiety and/or depression is increasingly identified as a contributing factor in pain behaviour. There have been a number of questionnaires developed to evaluate shoulder function and disability. These yield varying scores and the variation may be due to the extent that they reflect psychological distress.

Aims and objectives

This article looks to answer two questions:

1. To what degree shoulder outcome measures reflect patient's psychological distress?
2. Whether patients who are strongly affected by psychological distress can be identified?

Methods

132 patients with shoulder pain were evaluated, 119 patients met the criteria of; disorders caused by degenerative or inflammatory changes in the shoulder region, symptom duration greater than 3 months, 30 years or older, ability to complete the questionnaires. 13 patients were excluded with shoulder instability and those with pain originating from cardiovascular and neurologic problems.

Demographic and clinical data were collected, including BMI, disease duration, pain score in activity, ROM, muscle force. All participants completed three shoulder instruments;

1. Constant-Murley Scale
2. Simple shoulder Test (SST)
3. Disabilities of the Arm, Shoulder and Hand (DASH)

And two depression scales;

1. Centre for Epidemiologic Studies-Depression (CES-D)
2. Pain Anxiety Symptom Scale (PASS)

To evaluate to what degree shoulder outcome instruments reflect patient's psychological distress, multiple linear regression analysis after univariate correlation analysis was completed. Pearsons correlation was completed between various variables.

Results

Psychological distress measures correlated quite differently with the three shoulder outcome measures, and contributed to worsening SST and DASH scores but not Constant-Murley scores.

Each of the three shoulder instruments correlated with the two other instruments.

Limitations and considerations

A cross sectional cohort was chosen so it was difficult to determine the direction of the relationship between psychological distress and patient perceived disability. A longitudinal study was suggested to overcome this. Not all shoulder outcome measures were assessed. Psychological distress was measured by a self-administered questionnaire and not a psychiatric interview, however this was thought to be too time consuming.

Conclusion

Correlations between the psychological measures and shoulder outcome instruments were quite different for the three measures examined. Constant-Murley scores showed little correlation with psychological factors, for this instrument patient-based assessment accounted for only 35% of the score, with the remaining 65% allocated to objective assessments. SST and DASH scores are based wholly on self-reported assessment. The SST doesn't contain items that directly assess psychological distress, however it did moderately correlate with PASS scores. More of the variance of DASH scores was explained by the psychological model than in SST or Constant-Murley. The authors stop short of directly commenting on the 2 objectives, but do say that they showed shoulder outcome measures were affected by different psychological aspects of illness behaviour and the contributions made by psychological distress was shown differently in the various shoulder outcome measures.