



Depression predicts worse quality of life outcomes following non-operative treatment for lumbar stenosis

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Introduction

Depression predicts pain and disability following lumbar spine surgery.

No studies have investigated pre-treatment depression on outcomes following conservative management of LSS.

We sought to determine whether pre-treatment depression is predictive of quality of life (QOL) improvement for patients with lumbar spinal stenosis (LSS) that are treated conservatively.

Methods

This retrospective cohort study included patients with LSS and concordant neurogenic claudication that were treated conservatively. Patient QOL measures were recorded pre-treatment and then 4 months following treatment. Pre-treatment depression was assessed via the Patient Health Questionnaire -9 (PHQ-9). Successful outcome was defined as post-treatment improvement in EQ-5D Index (Quality adjusted life year; QALY) or improvement in Pain and Disability Questionnaire (PDQ). Regression analysis was performed to identify independent predictors of outcome while controlling for confounding variables.

Results

502 patients were included in the study. The average age for these patients was 66.1 years, with 51% female and 90.6% white.

After adjusting for baseline demographic and clinical variables, there was a statistically significant association between baseline PHQ-9 and postoperative change in QALY ($\beta = -0.007$, $p=0.002$).

All other things being equal, a patient with a baseline PHQ-9 score of 0 (~no depression) would be expected to improve in their QALY by 0.14 points (greater than the minimum clinically important difference, MCID) more than a patient with a baseline PHQ-9 score of 20 (~major depression). There was no significant association between baseline PHQ-9 score and change in PDQ.

Conclusions

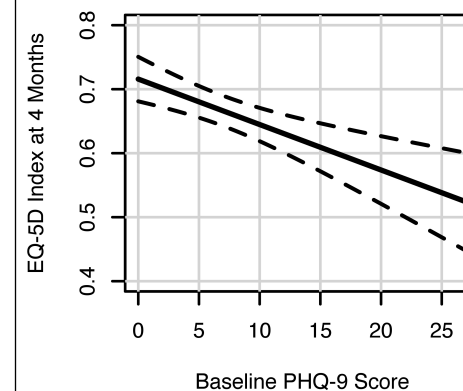
When controlling for other baseline characteristics, severely depressed patients with LSS that are treated non-operatively have worse improvement in their quality of life compared with those with little or no depression.

These data are similar to the negative predictive effects of depression on postoperative quality of life following lumbar fusion surgery.

Learning Objectives

Understand the impact of pre-treatment depression on quality of life outcomes following nonoperative treatment of lumbar spinal stenosis

Figure 1



Plot of predicted 4 month followup EQ5D index across the range of possible PHQ9 scores for the average patient