

The Effect of Modified Japanese Orthopedic Association Scores on Patient Satisfaction After Surgery for Cervical Myelopathy

Ahilan Sivaganesan MD; Silky Chotai MD; Anthony L. Asher MD FACS; Clinton J. Devin MD [Institution]

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Introduction

Satisfaction score have become a major tool in assessing the quality of surgical spine care. We set out to determine the impact of baseline and 12-month modified Japanese Orthopedic Association scores (mJOA) on satisfaction with surgery for cervical myelopathy.

Methods

Patients undergoing surgery for cervical spondylotic myelopathy were queried from prospective multicenter quality outcomes database (QOD). Baseline and 12-month mJOA scores were recorded. Satisfaction at 12-month after surgery was measured using the NASS questionnaire. Multivariate proportional odds regression analysis was conducted to determine the impact of mJOA scores on satisfaction.

Results

Of 820 total patients, 64% (n=522) were felt that surgery met their expectations (NASS level 1) at 12months. After adjusting for baseline and surgery-specific variables, 12month mJOA score had the highest impact (Wald ?2=51.8, 48% of the total ?2) on satisfaction. Satisfaction increased with increasing 12-month mJOA, and a greater mJOA improvements were required to achieve satisfaction in patients with lower baseline mJOA scores (Figure 1). Other predictors include diabetes, age, occupation, and duration of symptoms (Figure 2). Baseline mJOA scores had relatively little impact on satisfaction (Wald ?2=0.77, <1% of the total ?2).

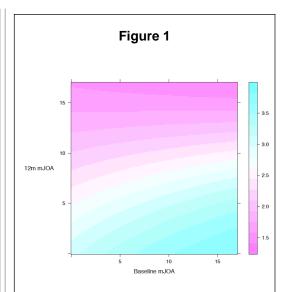
Conclusions

Of a total of 820 patients, 64% (n=522) were satisfied at a level wherein surgery met their expectations (NASS level 1) at the one year mark. After adjusting for baseline and surgery-specific variables, 12-month mJOA score had the highest impact (Wald ?2=51.8, 48% of the total ?2) on satisfaction. The level of satisfaction was found to increase with increasing 12-month mJOA score, and a greater improvement in mJOA was required to achieve satisfaction in patients with lower baseline mJOA scores (Figure 1). Other

Learning Objectives

By the conclusion of this session, participants should be able to: 1)
Describe the importance of satisfaction scores in assessing the quality of spine surgery, 2) Discuss the impact of baseline and 12-month mJOA scores on satisfaction after surgery for cervical myelopathy, and 3) Explain the phenomenon wherein patients with severe myelopathy require larger mJOA improvements to achieve satisfaction.

References



This heat map demonstrate the 3-dimensional relationship between patient satisfaction, baseline mJOA, and 12-month post-operative mJOA. The legend bar on the right shows the correspondence between the satisfaction index (NASS satisfaction index 1-4) and colors in the heat map. Pink represents the highest level satisfaction level(NASS index=1) and blue represents the least satisfaction (NASS index=4).

