

Relationship Between Koenig Depression Scale and Post-Operative Outcomes, Ambulation and Perception of Pain in Elderly Patients (65 Years) Undergoing Elective Spinal Surgery for Adult Scoliosis

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Introduction

Little is known about the impact that Koenig Depression Scale (KDS) has on identifying depressed patients at risk for inferior postoperative outcomes after elective spine surgery in this patient population. The aim of this study was to assess whether KDS can identify depressed elderly patients undergoing elective spine surgery for deformity at risk for inferior postoperative outcomes, including complication rates, ambulation ability, and patient reported outcomes.

Methods

The medical records of 92 elderly patients (=65 years) undergoing a planned elective spinal surgery for correction of adult degenerative scoliosis were reviewed in this study. Pre-operative baseline depression was assessed using the validated KDS that was administered by a board-certified geriatrician. KDS is made up of 11 questions, which can give a maximum of 11 points. No depression is score <4 points, while depression is 4 points or greater.

Results

Of the 92 patients, 20 (21.7%) patients were found to have a KDS score of =4 (Koenig Depression: n=20 vs. Koenig Non-Depression: n=72). Baseline demographics and comorbidities were similar between both cohorts, including age, gender and BMI. Intraoperative variables and complications were similar between both cohorts, including operative time(p=0.66), estimated blood loss (p=0.28), and incidence of durotomies(p=0.51). There was no significant difference in postoperative complications, including length of hospital stay (p=0.12), proportion of patients transferred to ICU (p=0.11), and experienced episodes of delirium (p=0.13). There was no significant difference in ambulation abilities, including preoperative gait speed (p=0.38), days from operation to ambulation (p=0.86), steps on first day of ambulation (p=0.57), and steps prior to hospital discharge (p=0.35). There was no significant difference between the cohorts in VAS scores at baseline (p=0.19), 6-weeks (p=0.91), 3-months (p=0.58), and 6-months (p=0.97) after hospital discharge..

Conclusions

The applicability of the Koenig scale may not be as useful for geriatric patients undergoing elective spine surgery for degenerative scoliosis.

Learning Objectives

By the conclusion of this session, participants should be able to:

- 1) Describe the importance of depression and geriatrics depression scales such as Koenig.
- 2) Discuss, in small groups, the implications that depression has on the geriatric patients undergoing spine surgery.