

Spine Surgery in Octogenarians: Analysis of 14,108 Patients in the MarketScan Longitudinal Database

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Introduction

Spine surgery in octogenarians has not been retrospectively reviewed, nationally, to assess the safety of decompression, discectomy, fusion and instrumentation, and re-fusion. Our aim was to analyze the risks of these spinal procedures in this growing population.

Methods

We identified patients in Thomson Reuters MarketScan database who underwent spine surgery 2000-2012. Current procedural terminology (CPT) coding at inpatient visit was used to select for procedure. Comorbidities and complications were obtained. Outcome measures included length of stay (LOS), in-hospital mortality, and in-hospital complication rates.

Results

The study analyzed 14,108 surgically treated patients over age 80 years (mean 83.03) with primary diagnosis of spinal stenosis and disc herniation/ protrusion who underwent fusion, re-fusion, decompression and discectomy. Univariate analysis showed: increased LOS following re-fusion (mean 5.84 days) versus all other surgeries: fusion (mean 4.59 days), decompression (mean 3.36 days), discectomy (mean 3.17 days) ($p < .0001$); increased rates of in-hospital mortality in those undergoing fusion versus decompression, and discectomy; in-hospital complications were similar in those undergoing fusion and decompression, mildly increased in discectomy patients and decreased in re-fusion patients ($p < .0001$). Multivariate analysis compared mortality, LOS, and complication between procedure type, gender, age at diagnosis, and diagnosis type. Mortality and LOS odds ratios (95% confidence interval) increased in discectomy (0.991) and re-fusion patients (1.262). Complication odds ratio were similar in re-fusion (0.609), decompression (0.659), and discectomy patients (0.699).

Conclusions

All types of spinal surgeries in octogenarians were associated with

Learning Objectives

To help surgeons understand the risk of surgery in Octogenarians.

References