

Should Physical Therapy be Incorporated in Patient Care Post 1-2 Level Lumbar Fusions for Degenerative Lumbar Instability? -A Comparative Outcome Analysis

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Introduction

Fewer studies in the literature have examined the role of post-operative physical therapy (PT) after lumbar fusion. In the post-operative setting, much of the rehabilitation literature focuses on post-discectomy patients. The study aims to evaluate and compare the changes in pain and functional scores between patients who completed PT versus no-PT after their anterior or posterior/posterolateral 1-2 level lumbar fusions for degenerative lumbar instability.

Methods

We assembled a clinical database of patients with PT and no-PT visits post anterior or posterior/posterolateral 1 or 2 levels lumbar fusion surgery for degenerative disease from June 1st, 2014-April 30th 2016. Basic demographic and outcome scores such as Oswestry disability index (ODI) and Visual analog scale (VAS) were collected. Independent two-sample with unequal variances were used to assess for differences between the two groups ($\alpha=0.05$).

Results

72 and 51 patients in PT and no-PT met the inclusion criteria, respectively. There were higher numbers of females (63.8%) in PT group. No-PT group had similar numbers of males and females. Mean ages for PT and no-PT groups were $61.4(\pm 14.7)$ and $59.5(\pm 14.1)$ years, respectively. Both groups were similar with respect to body mass index. Majority of the cases in both groups involved posterior/posterolateral approach. 55.5% of patients in PT group and 50.9% in no-PT had 1 level lumbar fusion. Mean change (pre-operative vs. 1 year post-operative) in ODI between the two groups differed significantly (PT vs. no-PT: 18.8 ± 13.9 and 9.3 ± 17.5 ; $p=0.019$). Similarly, mean change in VAS was significantly different between the two groups (PT vs. no-PT: 3.2 ± 2.18 and 1.05 ± 2.08 ; $p=0.026$). None of our PT patients reported any change in pre vs. 1 year post-operative follow up employment status (35% retired, 38% employed fulltime, 11% unemployed and 16% homemaker). 98% of No-PT patients reported no change in employment status during the same timeframe (46% retired, 25% employed fulltime, 13% unemployed and 15% homemaker).

Conclusions

PT group reported significantly

Learning Objectives

Understand the effects of physical therapy on outcome measures such as pain and functional scores in patients after their anterior or posterior/posterolateral 1-2 level lumbar fusions for degenerative lumbar instability.

References