

Introduction

Identification of factors which predict successful patient reported outcomes, including the need for time in a rehabilitation facility after surgery, are becoming more relevant as we transition to bundled payments and value-based care. Sagittal imbalance is associated with persistent patient-reported disability and development of adjacent segment disease.

Methods

In this study, a prospectively-collected surgical database of patient reported outcomes was queried for all posterolateral approaches to lumbar interbody fusion for degenerative spinal diseases at our institution. Preoperative demographic data, intraoperative parameters, and 90-day postoperative complications by a single-surgeon were abstracted from the database from January 1, 2016 – December 31, 2017. The primary outcome measure was the likelihood of discharge to a rehab facility. This data was correlated to an assessment of postoperative spinal sagittal parameters, with the assessor blinded to the discharge disposition.

Results

Seventy-three patients were assessed for sagittal parameters and discharge disposition. For patients with a discharge to home, Sagittal Vertebral Axis (SVA) averaged 3.5 ± 0.4 cm compared to 8.0 ± 1.3 cm? for patients discharged to rehab (p=0.003). Patient age (p=0.003), ileus (p=0.017), deep vein thrombosis (p=0.017) and prolonged length of procedure (p=0.031) were also noted to be significantly associated with discharge to rehab. In a multivariable regression, the odds of discharge to rehab increased by 45% for every additional centimeter in the positive SVA (p=0.027).

Conclusions

Undercorrection of positive SVA is associated with increased likelihood of discharge to a rehabilitation facility. Thus, presurgical counseling, optimization, and intraoperative correction of positive SVA would be modifiable factors which are associated with decreased length of stay and increased postoperative independence.

Learning Objectives

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

- 1) Describe the importance of sagittal balance on postoperative discharge disposition
- 2) Discuss, in small groups ways they could change their practice to improve these outcomes.
- 3) Identify patients in whom significant deformity correction may not be warranted

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