

PubMed

Display Settings: Abstract

Full text links

Spine (Phila Pa 1976). 2005 Sep 15;30(18):2024-9.



The impact of positive sagittal balance in adult spinal deformity.

Glassman SD¹, Bridwell K, Dimar JR, Horton W, Berven S, Schwab F.

Author information

Abstract

STUDY DESIGN: This study is a retrospective review of 752 patients with adult spinal deformity enrolled in a multicenter prospective database in 2002 and 2003. Patients with positive sagittal balance (N = 352) were further evaluated regarding radiographic parameters and health status measures, including the Scoliosis Research Society patient questionnaire, MOS short form-12, and Oswestry Disability Index.

OBJECTIVES: To examine patients with adult deformity with positive sagittal balance to define parameters within that group that might differentially predict clinical impact.

SUMMARY OF BACKGROUND DATA: In a multicenter study of 298 adults with spinal deformity, positive sagittal balance was identified as the radiographic parameter most highly correlated with adverse health status outcomes.

METHODS: Radiographic evaluation was performed according to a standardized protocol for 36-inch standing radiographs. Magnitude of positive sagittal balance and regional sagittal Cobb angle measures were recorded. Statistical correlation between radiographic parameters and health status measures were performed. Potentially confounding variables were assessed.

RESULTS: Positive sagittal balance was identified in 352 patients. The C7 plumb line deviation ranged from 1 to 271 mm. All measures of health status showed significantly poorer scores as C7 plumb line deviation increased. Patients with relative kyphosis in the lumbar region had significantly more disability than patients with normal or lordotic lumbar sagittal Cobb measures.

CONCLUSIONS: This study shows that although even mildly positive sagittal balance is somewhat detrimental, severity of symptoms increases in a linear fashion with progressive sagittal imbalance. The results also show that kyphosis is more favorable in the upper thoracic region but very poorly tolerated in the lumbar spine.

PMID: 16166889 [PubMed - indexed for MEDLINE]



MeSH Terms

LinkOut - more resources

PubMed Commons

[PubMed Commons home](#)

0 comments

[How to join PubMed Commons](#)