Podium Presentation Abstracts
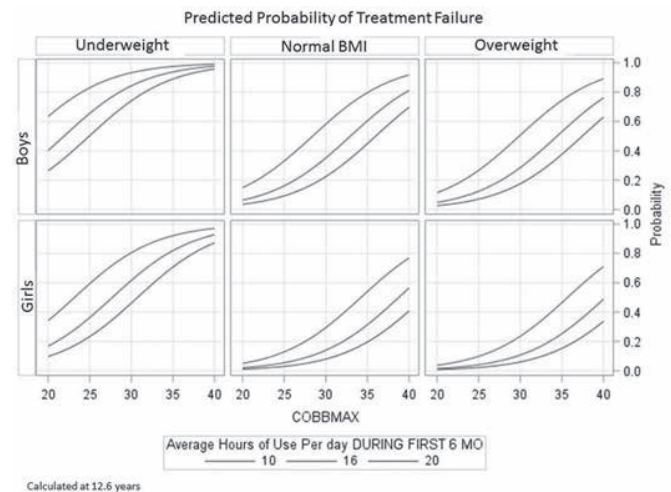
protocol) were captured by a variable named "SITE." Outcome: Treatment failure (Cobb≥40 before Risser 4). Statistical analysis: Comparison of baseline characteristics, analyses of risk factors, treatment components and outcomes within and between cohorts using logistic regression.

Results

157 BrAIST and 81 ISICO subjects were included. Cohorts were similar at baseline but differed significantly in terms of average hrs of brace wear: 18.31 in the ISICO vs. 11.76 in the BrAIST cohort. 12% of the ISICO and 39% of the BrAIST cohort had failed treatment. Age, Risser, Cobb and a thoracic apex predicted failure in both groups. SITE was related to failure (OR=0.19), indicating lower odds of failure with ISICO vs BrAIST approach. With both SITE and wear time in the model, SITE was no longer a significant predictor. In the final model, the adjusted odds of failure were higher in boys (OR=3.34), and those with lowest BMI (OR=9.83); the odds increased with the Cobb angle (OR=1.23), and decreased with age (OR=0.41) and hours of wear (OR=0.86).

Conclusion

Treatment at the ISICO resulted in a lower failure rate, which was primarily explained by longer average hours of brace wear.

Predicted Probability of Treatment Failure

Average Hours of Use Per day DURING FIRST 6 MO
—— 10 —— 16 —— 20

Calculated at 12.6 years

16. AIS Bracing Success is Influenced by Time In Brace: Comparative Effectiveness Analysis of BrAIST and ISICO Cohorts

Lori A. Dolan, PhD; Sabrina Donzelli, MD; Fabio Zaina, MD; Stefano Negrini, MD; Stuart L. Weinstein, MD

Summary

This study corroborates previous work and provide evidence that longer hours of brace wear improve outcomes in high-risk AIS patients.

Hypothesis

No difference in outcome between patients treated in BrAIST and with standard care at the Italian Scientific Spine Institute (ISICO).

Design

Comparative effectiveness

Introduction

Studies of bracing in North America have shown worse outcomes than many studies from European centers, possibly due to sample characteristics or treatment approaches.

Methods

Sample: Braced patients, age 10-15, Risser< 3, Cobb 20-40°, observed to Cobb ≥40° and/or ≥Risser 4 selected from prospective databases. Comparators: Bracing per BrAIST (TLSO) and ISICO protocol (SPoRT braces with or without SEAS exercises and cognitive-behavioral support). Baseline characteristics (sex, age, BMI, Risser, Cobb, curve type) and average hrs of brace wear/day. Differences in programs (e.g. SEAS, type of brace, weaning

17. Efficacy of Bracing for Main-Lumbar vs Main-Thoracic Curves in Patients with Adolescent Idiopathic Scoliosis at Risser 0

John Vorhies, MD; Lori Ann Karol, MD; John A Herring, MD

Summary

Retrospective cohort study of bracing in AIS which demonstrates that brace wear was less effective for thoracic curves than for lumbar curves.

Hypothesis

Increasing hours of brace wear will be associated with decreased risk of curve progression.

Design

Retrospective cohort

Introduction

Prior research supports the efficacy of bracing in preventing curve