

THE RESULTS OF CHARLESTON BRACING IN SKELETALLY IMMATURE PATIENTS WITH IDIOPATHIC SCOLIOSIS.

Based on this study we feel the Charleston brace favorably affects the natural history of scoliosis

*Jayesh M Trivedi FRCS (Orth), MCh (Orth)
Jeffery D. Thomson, M.D.
Department of Pediatric Orthopaedic Surgery
Connecticut Children's Medical Center*

Charleston Bending Brace

The Trend

- “The trend, therefore, seems to indicate that the Charleston bending TLOS may be equally as effective as other forms of orthotic treatment”
- From the Department of Orthopaedics and Rehabilitation, Yale University School of Medicine, New Haven, and the Department of Orthopaedic Surgery Newington Children’s Hospital, Newington Connecticut - *Presented at the 24h Annual Meeting of the Scoliosis Research Society*

Charleston Bending Brace

Conclusion

- With the exception of single thoracic curves, the BB and the CBB are comparable in preventing curve progression in patients with curves of 25 to 35 degrees – A comparison between the BNB and the CBB in adolescent idiopathic scoliosis; Katz, Richards, et al *Spine* 1997

Charleston Bending Brace

Direct Comparison

- Riser 0 + 2 Followed to Maturity

Progression			
	20-29 degrees	30-39 degrees	Total
Lonstein & Winter 329 patients	40%	47%	43%
Price, et al. 69 Patients	22%	50%	35%

Charleston Bending Brace

Effective

- Nighttime Bracing of the Adolescent Idiopathic Scoliosis Using the Charleston Bending Brace.
 - 16% Surgery
 - 79% Brace Effective
 - *Scott DS, Price CT, et al. AAOS 2/28/94*

Charleston Bending Brace

Results of six year study

- Comparison of night time bracing and observation in adolescent girls
- Curves between 15° and 25°
- Premenarchal girls
- Risser 0
- Lots of growth remaining
 - *CT Price M.D., S. Shah, M.D., G. Dodge, Ph.D.*
 - *Submitted for presentation SICOT, 2008*

Charleston Bending Brace

Charleston Brace

- 30 CBB patients compared to TLSO results
- “Nighttime bending brace was considered as effective as the Wilmington brace in controlling adolescent idiopathic scoliosis”

• *Bowen, et.al.*

• *Orthopedics 24:967, 2001*

Charleston Bending Brace

Comparison of TLSO Charleston and Milwaukee Braces

- Risser 0, 1
- Curves 25 - 40o
- Progression > 10o
- TLSO 10%
- Charleston 36%
- Milwaukee 80%



*Howard, Wright & Hedden
Spine 23:2404, 1998*

Charleston Bending Brace

Charleston Brace

- 85 CBB patients
- 27 TLSO patients
- “No significant differences in success rate was found between the two groups”

Gepstein, et.al.

JPO 22:84, 2002

Charleston Bending Brace

Boston vs. Charleston

- “We found no significant differences between the two brace groups in treating smaller curves (25 - 35o)...”

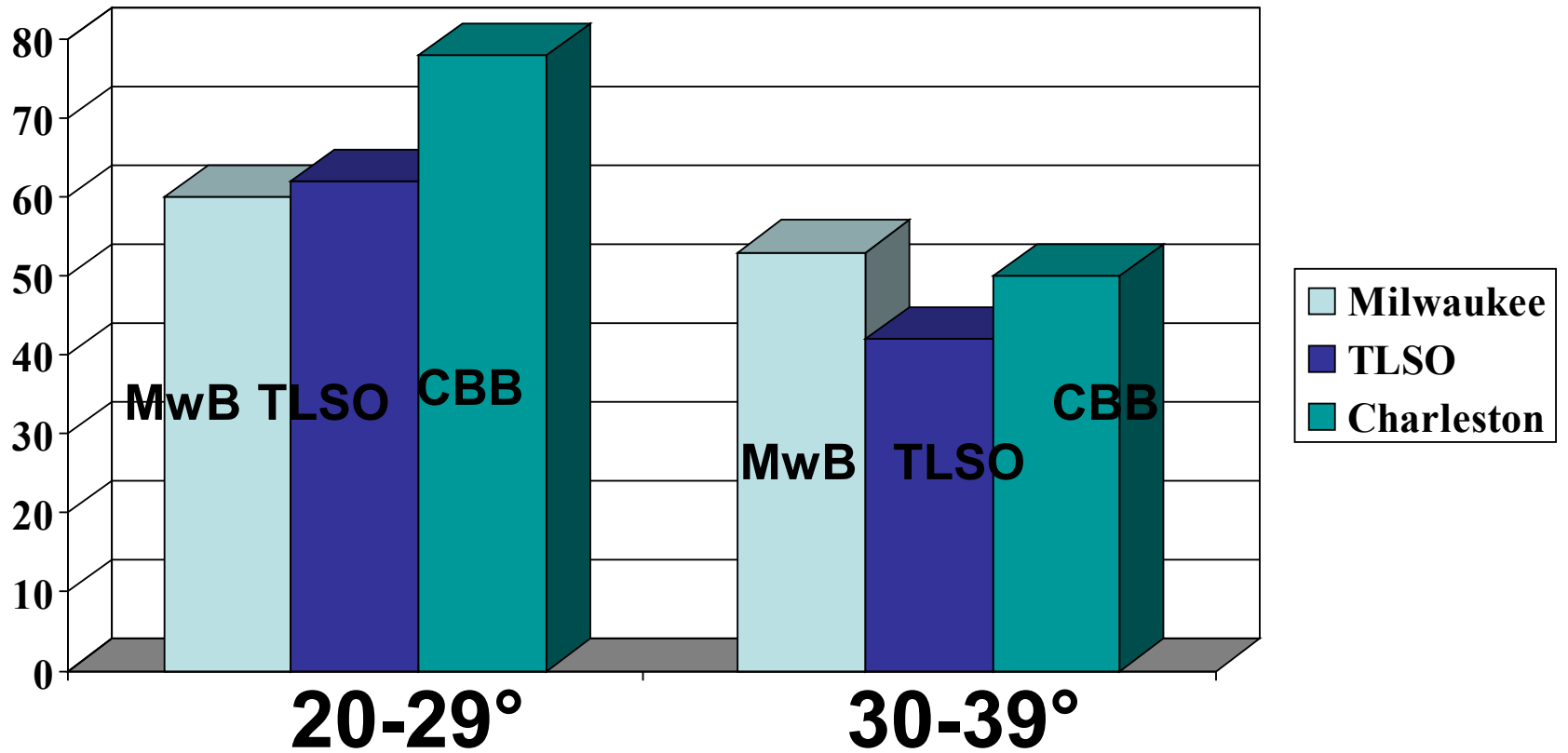


Katz, et al.

Spine 22:1302, 1997

Charleston Bending Brace

Brace Success



Lonstein and Winter
Allington and Bowen
Price, et.al.

Operative intervention with bracing

- Emans, et al., 1986 16%
- Piassa & Bassett, 1988 12%
- Lonstein & Winter, 1994 22%
- Price, et al., 1996 16%
- Spoonamore, et.al. 2004 30%
- Coillard, et.al. 2007 23%

Charleston Bending Brace

Boston vs. Charleston

- “Both orthoses were comparably effective in treating single thoracolumbar and single lumbar curves.”
- Equally effective to 35 degrees
- Boston Brace more effective for larger curves

Katz, et al.

Spine 22:1302, 1997

Charleston Bending Brace