



Application of Cheneau brace for Conservative Management of Early Onset Scoliosis

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Background

Casting, halo-traction, Milwaukee, TLSO braces are routinely used for the conservative treatment of early onset scoliosis

These methods are intended to prevent progression for several years allowing fusion to be delayed

D'Astous, J.L., Sanders, J.O.: Casting and traction treatment methods for scoliosis. *Orthop. Clin. North Am.* 38, 477–84g (2007)

Emans, J.B., Johnston, C.E., Smith, J.T.: Preliminary halo-gravity traction facilitates insertion of growing rods or VePTR devices in severe early onset spinal deformity. Paper #43. In: 42nd Scoliosis Research Society, Edinburgh, 5–8 Sept 2007

Mehta, M.H.: Growth as a corrective force in the early treatment of progressive infantile scoliosis. *J. Bone Joint Surg. Br.* 87, 1237–47 (2005)

Pehrsson, K., Larsson, S., Oden, A., et al.: Long-term follow-up of patients with untreated scoliosis. A study of mortality, causes of death, and symptoms. *Spine* 17, 1091–96 (1992)

Jacques L. D'Astous, MD, James O. Sanders Casting and Traction Treatment Methods for Scoliosis *Orthop Clin N Am* 38 (2007) 477–484

Purpose

The purpose of this study is to define if Cheneau brace is effective in growing patients with EOS

Material and methods

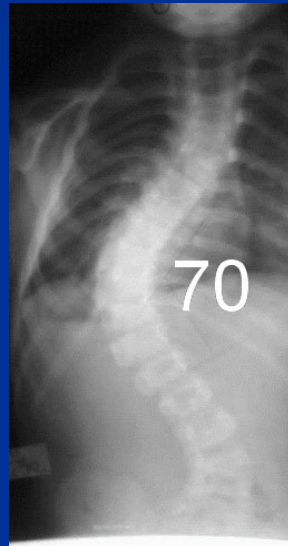
17 patients:

3 males

14 females

- Age 2-5years (mean 4,3)
- Follow-up 2 -7 years, all patients continue bracing
- mixed spinal anomaly – 3pt. Mean Cobb angle was 52,3°
- wedge hemivertebra – 10pt. Mean Cobb angle was 33,2°
- infantile idiopathic scoliosis – 4pt. Mean Cobb angle was 40°
- full time Cheneau brace treatment
- Clinical assessment every 3 month and radiographic assessment in brace every other month after brace and radiographic assessment without brace before brace change.

Patient with infantile idiopathic scoliosis (3yo)



Before bracing



**Patient in
brace**

**After 7 years
without brace**

Patient mixed spinal anomaly (2yo)

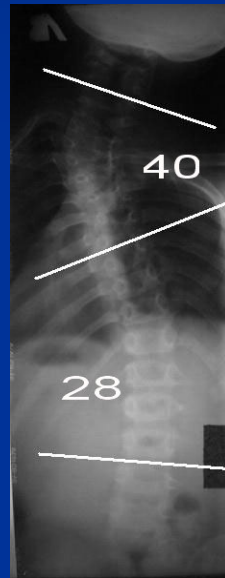


Before bracing

After 2 years

**After 5 years without
brace**

Patient mixed spinal anomaly (5yo)



Before bracing

After 5 years of treatment

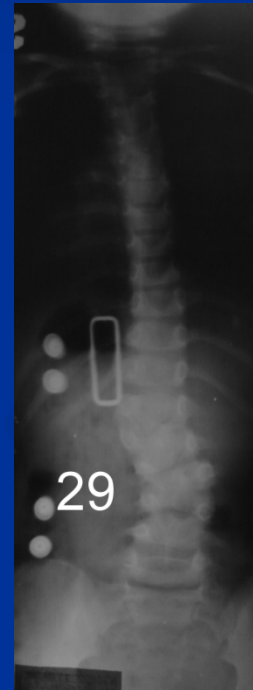
Patient with 2 wedge hemivertebrae (3 yo)



Before bracing



Patient in brace



After 1 year



After 3 years without brace

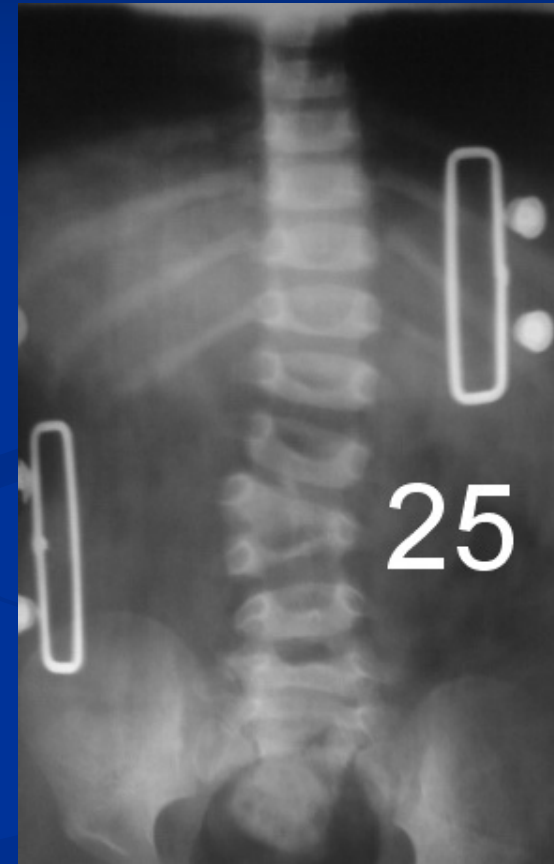
Patient with wedge hemivertebra (2 yo)



Before bracing

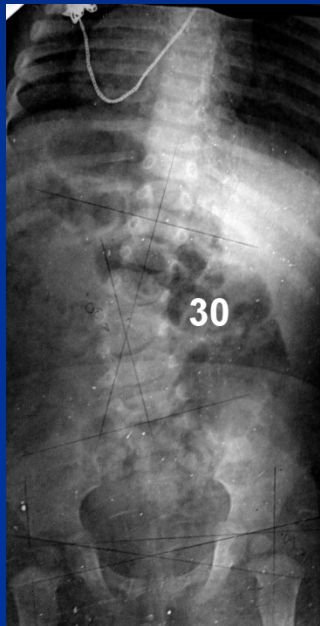


Patient in brace



After 1 year

Patient with wedge hemivertebra (10 m)



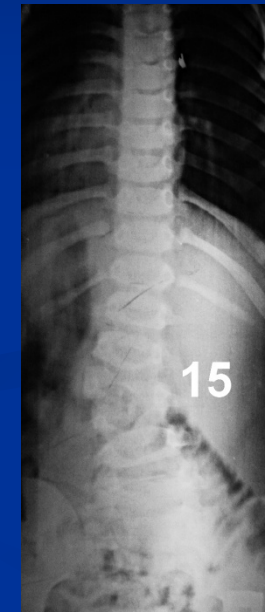
**Before
bracing**



**Patient in
brace**



After 2 years



Results

mixed spinal anomaly :

1 patient have had 7° correction, 1 patient have had 8° progression and 1 patient have had stable deformity.

wedge hemivertebra:

mean correction was 3° (-2°– 15°)

infantile idiopathic scoliosis:

mean correction was 8,75° (0°-30°)

Conclusion

Application of Cheneau brace results in deformity correction in 7 (41%) cases and stabilization in 8 cases (47%).

In 2 (12%) cases progression was observed. Infantile idiopathic scoliosis patients have better correction than patients with congenital spinal abnormalities