

Oral presentation

Open Access

## A prospective study on the clinical efficacy and patients' acceptance of SpineCor and rigid spinal orthoses in treatment of AIS

MS Wong\*<sup>1</sup>, CY Cheng<sup>2</sup>, BKW Ng<sup>2</sup>, TP Lam<sup>2</sup>, SW Sin<sup>3</sup>, LF Lee-Shum<sup>4</sup>, HK Chow<sup>1</sup> and YP Tam<sup>1</sup>

Address: <sup>1</sup>Department of Health Technology and Informatics, The Hong Kong Polytechnic University, Hong Kong, <sup>2</sup>Department of Orthopaedics and Traumatology, Chinese University of Hong Kong, Hong Kong, <sup>3</sup>Department of Prosthetics and Orthotics, Prince of Wales Hospital, Hong Kong and <sup>4</sup>Department of Physiotherapy, Prince of Wales Hospital, Hong Kong

\* Corresponding author

from 5<sup>th</sup> International Conference on Conservative Management of Spinal Deformities  
Athens, Greece. 3–5 April 2008

Published: 15 January 2009

*Scoliosis* 2009, **4**(Suppl 1):O36 doi:10.1186/1748-7161-4-S1-O36

This abstract is available from: <http://www.scoliosisjournal.com/content/4/S1/O36>

© 2009 Wong et al; licensee BioMed Central Ltd.

### Background

Although the clinical effectiveness of rigid spinal orthosis to AIS has been demonstrated, the patient's acceptance is always a concern. Poor compliance may affect treatment outcomes as well as a patient's quality of life. The flexible spinal orthosis, SpineCor is a relatively new design for tackling those inevitable drawbacks inherent in the rigid spinal orthosis. However, there are few studies to compare the SpineCor system with the rigid spinal orthosis regarding their treatment efficacy and patients' acceptance.

### Aim

The objective of this study is to compare treatment efficacy and patient acceptance for the SpineCor system with the rigid spinal orthosis.

### Methods

Forty-three subjects with moderate AIS were randomly assigned to the SpineCor group (S group, n = 22) and the rigid orthosis group (R group, n = 21). In this prospective study, their survival rate in the first 45 months of intervention was studied. The subjects' acceptance to the orthoses was evaluated by a purpose-designed questionnaire which was administered in the 3<sup>rd</sup>, 9<sup>th</sup> and 18<sup>th</sup> months of intervention.

### Results

The results of this study showed that there were 68% of the subjects in the S group and 95% of the subjects in the

R group did not show curve progression > 5°. A significant difference ( $p = 0.046$ , by Fisher exact test) in failure rate between the 2 subject groups was found. In the patient survey, the 2 subject groups had similar responses to the questionnaire.

### Conclusion

This study demonstrated that the rigid spinal orthosis was more effective than the SpineCor in curve control while the patients' acceptances to these two orthotic designs were comparable.

### References

1. Wong MS, Cheng CY, Ng BK, Lam TP, Sin SW, Lee-Shum LF, Chow HK, Tam YP: **The effect of rigid versus flexible spinal orthosis on the gait pattern of patients with adolescent idiopathic scoliosis.** *Gait Posture* 2008, **27**(2):189-95. Epub 2007 Apr 26.