

ORAL PRESENTATION

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# Are brace prescribers following standards?

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From 7th International Conference on Conservative Management of Spinal Deformities  
Montreal, Canada. 20-22 May 2010

## Introduction

Even if braces for scoliosis are broadly used in Canada, there is no data on the orthopaedic medical practice to evaluate the circumstances of brace prescription. This study aims at comparing scoliosis brace prescription patterns with generally recognized standards.

## Materials and methods

A cross-sectional study was carried out between March 2006 and March 2007, on all confirmed AIS patients aged 10 to 18, who were referred to a pediatric scoliosis clinic in a major referral center for a first visit. Agreement between the actual brace prescription patterns and the criteria for immediate prescription was analyzed using a kappa coefficient. Standard recommendations supported by the Quebec Scoliosis Network (QSN) were used, as well as the Scoliosis Research Society (SRS) therapeutic inclusion criteria. In addition, logistic regression models were used to identify variables related to brace prescription.

## Results and discussion

Amongst the 321 AIS patients, immediate brace treatment was recommended in 70 cases, for about 50% of concordance with the defined criteria (Table 1). Variables describing the patients' maturity (age, Risser, onset of menses) and curve magnitude (Cobb angle and rib hump) were associated with brace prescription. In multivariate analyses, the prescription patterns differed mostly by physicians.

## Conclusion

Despite the professional consensus on immediate bracing, under and over prescription of brace were documented in this study. Better understanding of these patterns would require documentation of motives associated with prescription at the individual level. An

investigation of the physicians' beliefs, attitudes and intentions appears essential to achieve better ways of following therapeutic norms for brace prescription.

Published: 10 September 2010

doi:10.1186/1748-7161-5-S1-O40

Cite this article as: Fall *et al.*: Are brace prescribers following standards?  
*Scoliosis* 2010 **5**(Suppl 1):O40.

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**Table 1 Agreement between actual brace prescription and defined criteria (QSN and SRS)**

	QSN immediate prescription criteria		SRS therapeutic inclusion criteria		Total
	Risser [0-3] Cobb [30° - 45° ]		Risser [0-2] Cobb [25° - 40° ]		
	yes	no	yes	no	
<b>Actual brace prescription</b>					
<b>yes</b>	36	34 <sup>b</sup>	37	33 <sup>b</sup>	<b>70</b>
<b>no</b>	24 <sup>a</sup>	227	17 <sup>a</sup>	234	<b>251</b>
<b>Total</b>	<b>60</b>	<b>261</b>	<b>54</b>	<b>267</b>	<b>321</b>
<b>Kappa</b>	<b>k=0.441; p&lt;0.001</b>		<b>k=0.502; p&lt;0.001</b>		

<sup>a</sup> : under-prescription

<sup>b</sup> : over-prescription