Reviewer’s report

Title: Conservative treatment in scoliosis and vital capacity evolution Statistical analysis among 321 scoliotic patients treated with CMCR brace. Comparison to a group of 240 scoliotic patients treated with Lyon brace

Version: 1 Date: 1 December 2010

Reviewer: Marian H. Wade

Reviewer’s report:

Original Report: 29/11/2010

Major Compulsory Revisions:

Although the subject matter of the article is important in its field, this article is not of sufficient priority to merit publishing in this journal because the conclusions drawn by the authors are not indicated by the scientific data the article presents. The authors mysteriously choose to analyze all of the potentially confounding factors -- such as age, Risser sign and Cobb angle -- separately for the CMCR brace and the Lyon brace groups; however, combining these groups would have created not only an increased sample size but also greater variability, and might therefore have made it more likely for these factors to demonstrate effects. All of the differences discussed between the CMCR brace and the Lyons brace samples could theoretically be attributable to the vast differences in maturity and size between the two groups, instead of to the differences between the braces. For example, the increase in vital capacity noted at the end of treatment for the CMCR group could easily be explained by an increased rate of growth in this group compared to the Lyons group. (Here is where the presence of control groups would have been useful.) While I would agree that the subject merits study, I would insist that such a study be more rigorous, and its data more convincing, than the study under consideration for publication here.

Minor Essential Revisions:

In general, the language is awkward and is in need of extensive editing by a native English speaker.

Discretionary Revisions:

Out of respect for scoliosis patients, I would strongly recommend the substitution of the word "prominence" for "hump" wherever it appears. For the same reason, I would also recommend the substitution of the words "without the brace" for "naked," as I would not imagine that anyone would think that the presence or absence of ordinary clothing would have any effect on respiratory capacity.

Addendum to original review on 29/11/2010
I had forgotten to mention that there were also no clearly stated questions which the authors set out to answer in their paper, nor predicted findings based on any proposed hypothesis. As a result, the analyses appeared to be somewhat of a fishing expedition.

**Level of interest:** Reject as not of sufficient priority to merit publishing in this journal

**Quality of written English:** Not suitable for publication unless extensively edited

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.