Reviewer’s report

Title: Body mass index in relation to truncal asymmetry of healthy adolescents, a pathogenetic concept. Summary of an electronic focus group debate of the IBSE

Version: 1  Date: 3 February 2013

Reviewer: Tomasz Kotwicki

Reviewer’s report:

As in all previous papers of the series, this paper reflects current state of discussion within IBSE and highlights some aspects of pathogenesis of idiopathic scoliosis. The relation of sex, BMI and trunk asymmetry was previously studied by the authors. Here, they propose a more general concept which corresponds to the state of our knowledge in 2013. Discussion serves to more clearly present the concept so the reader receives a well-thought-out and balanced theory. Such a paper perfectly fits to the aim of scientific journal Scoliosis.

Scoliosis should absolutely publish the paper, considering a few minor revisions.

Minor revisions

1/ Title: there is a discrepancy between the first part of the title considering “healthy adolescents” and the second part concerning “pathogenetic concept” – of what? The second part of the title could take into account idiopathic scoliosis (“consequence on pathogenetic concept of idiopathic scoliosis”).

2/ Affiliation: I’m not sure whether the triple affiliation of the third author is to be listed under one unique number (3) or three consecutive numbers (3,4,5).

3/ Terminology:

It is not clear why the term “truncal asymmetry, TA” has been enlarged into “truncal bilateral asymmetry, TA”. What additional information the word “bilateral” contributes?

In fact, “Truncal transverse plane asymmetry” was what Grivas et al studied with inclinometer. Other asymmetries, for example frontal plane (shoulders, hips) were not analyzed.

The term of “truncal asymmetry, TA” does it cover the upper limbs asymmetries, the lower limbs asymmetries and the head asymmetries (in general - body asymmetries), mentioned in the paper?

Terminology comments are given to make the text clear for readers.

4/ Polemic against Huang et al comprises contra-productive argumentation. The usefulness of scoliometer for scoliosis screening should concern younger not older children.
5/ It is not clear why the authors agree with a comment: “if surgeons only used radiographs in forward bending position, many would be less keen for surgery”. Do the authors mean spine radiography or rib cage radiography? Spine radiography was never reported to be made in forward bending position (frontal view, vertical beam) so it is not possible to have idea on how the spine presents on such Xray. Rib cage radiography (axial view, horizontal beam) in scoliotic patients is very impressive in demonstrating rib hump and a frequent pro-surgery argument.

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** No, the manuscript does not need to be seen by a statistician.

**Declaration of competing interests:**

I declare that I have no competing interests.