Reviewer's report

Title: Why do we treat adolescent idiopathic scoliosis? What we want to obtain and to avoid for our patients. SOSORT 2005 Consensus Paper

Version: 1 Date: 2 January 2006

Reviewer: Martha Hawes

Reviewer's report:

General

This study documents the results of a human experiment in defining and establishing consensus. The experimental system was 'scoliosis treatment' and the subjects were clinicians who treat scoliosis. The results revealed a wide-ranging set of views, that forged to a much clearer focus and understanding as a result of one intensive conference. For most diseases, there is an inherent, clear-cut goal--get rid of the infecting organism, stop the cancer growth, resolve the fever, clear up the residual damage so the patient can resume optimal function. For scoliosis, treatment choices for an 8 year old (who is unlikely to be aware of any symptoms) will affect that person's life every day for decades on end. Strategies currently in operation for treating children with scoliosis (especially in 'Western medicine') were established before polio vaccines were developed, and surgery was essentially the only option for at least attempting to prevent death due to respiratory failure. A natural predominant influence of orthopedic surgeons that developed at that time has never yielded to a more multidisciplinary focus as patient demographics, and resulting treatment needs, shifted profoundly. Thus, strategies still stem largely from sentiments expressed in a 1941 article (Shands et al 1941) that attempted to carry out a study similar to the current one, using 16 orthopedic clinics in the U.S. They asked, 'Why do we treat? How is it working?' Several studies have followed 'natural history' of patients, with up to 50-year followup from first diagnosis. The current study provides a '60-year followup' on scoliosis clinicians.

This paper is profoundly important, groundbreaking. I can't emphasize what a critical resource it will be for this field. For patients around the world, especially in Scandinavia, the United States and other countries where 'Western' medicine predominates, scoliosis has been a confusing black hole of misinformation and lack of information. Even individuals who have dedicated their lives to working in the scoliosis field lack understanding of how the treatment they received was supposed to have helped them, let alone how or whether it actually did help them. Some who received spinal fusion for moderate curvatures still are laboring under the illusion that their surgery was endured for the sake of 'saving their lives' by preventing respiratory failure and therefore the crippling aftereffects of surgery complications was warranted.

This problem can be attributed, not to lack of effort on the patients' part to obtain information, but to a lack of coherent information available in the popular or peer-reviewed literature. I am an outsider to the field who undertook to find the core of scientific information upon which our current clinical approaches are based. I read everything published in English and available through University libraries and online searches, and was confounded by my inability to understand 'What are we treating?? Why? How? How is this treatment affecting THAT? Given that it's affecting it this way, WHY are we still doing it??' The one thing that is constant is the profound confusion and frustration on the part of patients at the idea of 'waiting and watching' while a structural deformity gets worse. The response on the part of orthopedists has been to insist that, despite abundant evidence to the contrary, that until it gets bad enough for (this or that) treatment, it is a completely benign condition warranting no intervention to, as the authors of this paper put it, 'restore the correct anatomy through
methods that should act in accordance with nature.'

This one paper under review will serve as a resource to help patients, parents, and clinicians, to at least understand how why we have been at such an impasse for so long. The dynamic approach (questionnaires before and after meeting) provides insight into the great divergence of viewpoint (and how much of it, as in the 1941 U.S. effort to undertake a similar project, is based simply on personal opinion and experience unsupported by data). Most important, it illustrates the power of just putting the questions out there for discussion, not only for information but also to catalyze informed consensus on what needs to be done.

-------------------------------------------------------------------------------
Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)

The writing is good. There is a tendency toward very long convoluted sentences. Since I am well known for writing very long convoluted sentences myself it doesn't seem like a very big problem to me, but some may find it makes the paper harder to follow than it should be. It may be worthwhile to go over it and break some key individual sentences into two (or three or four, as the case may be). An example--the last sentence of the abstract.

-------------------------------------------------------------------------------
Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

An overworking for grammar would be a good idea, since there are a few confusing places.

-------------------------------------------------------------------------------
Discretionary Revisions (which the author can choose to ignore)

Other concerns: It seems to me that some of the 'Results' section should be in 'Methods' and that nearly all of the 'Discussion' is comprised of 'Results.' My personal view is that the final sentence of the paper is the most important one of all ('Moreover, we advocate...') and might be introduced much earlier in the paper.

What next?: Accept after discretionary revisions
Level of interest: An article of outstanding merit and interest in its field

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.