Reviewer's report

Title: A Diagnosis-Based Clinical Decision Rule for Patients with Spinal Pain. Part 1: Theoretical Model

Version: 4 Date: 13 April 2007

Reviewer: John Childs

Reviewer's report:

General

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

Part of my problem with the paper is that I am fundamentally opposed to a biomedical model for LBP. Similar models have repeatedly failed to accurately inform clinical practice except for serious medical conditions and perhaps a few exceptions such as lumbar spinal stenosis. Much of the evidence would argue that the endless pursuit of the ‘painful structure’ has led our entire health care system down a futile path that has only increased the enormous problem of LBP and its associated disability. I think it’s important that I disclose my bias in this direction because I do not personally see how this effort will improve the management of LBP. Having said that, the paper is generally well written and developed in a scholarly manner, offering a construct for furthering the debate as to whether a pathoanatomical classification system can be developed that improves upon previous efforts.

1) The major remaining concern I have is that the title and ‘decision rule’ language throughout the paper implies that the classification system may be useful for decision-making, when this is an early theoretical proposal. Much of the language in the discussion is overly enthusiastic when there are no data at this stage. This is not a fatal flaw by any means given the purpose of the paper. However, readers walk away from the paper wondering whether they should be implementing some of these ideas tomorrow in their practice. The tone should be adjusted to reflect the early development stage of this system. I think it is important to change the DBCDR terminology throughout; otherwise the paper overstates the extent to which this information is currently useful to inform clinical practice. Decision rules are formed around prospective diagnostic and/or prognostic clinical studies. The title should clearly indicate ‘A Proposed System’ or something to that effect and eliminate decision rule language in the title and throughout the paper.

2) Another major concern is the apparent disconnect between the ultimate goal of this system being able to guide decision-making, yet the authors argue at the same time that their system is not a classification system. They suggest in the last paragraph of the discussion that:

‘the clinician is not limited to 3, 4 or 5 classifications, but is free to manage each patient according to those clinical features that are deemed most relevant in each case.’

This implies that there could be infinite combinations of patterns, each of which should be matched to a tailored approach. The problem of LBP is admittedly multifactorial, but there is far too much variability in clinical practice patterns for the same patient with LBP. How does this system propose to deal with the variability problem given the increasing evidence to support the ability to identify homogeneous sub-groups that can be matched to a finite number of optimal treatments? What are the proposed treatments for each pattern in this system? How many possible patterns are there? Any classification system that is developed has to have an element of pragmatism that makes its application to busy clinical practice in an environment of constrained costs a reasonable endeavor. Fundamentally, how does identifying painful tissue direct treatment? Many of the tests used to implicate a specific pathoanatomic source are clinical tests incorporated in other classification systems. It is unclear how this effort will overcome the futility of previous pathoanatomically based systems. The costs associated with pathoanatomic classification systems are not inconsequential. The pursuit of ‘pathoanatomic lesions’ is also known to increase pain-related fear, pain catastrophizing, and may predispose patients to an increased risk of unnecessary and expensive diagnostic and surgical procedures. I am not trying to over sensationalize this issue, but there are very legitimate concerns that pathoanatomically based classification systems for managing spinal conditions actually result in more harm than good and contribute to growing problem of chronic LBP. The authors should briefly acknowledge these concerns in their discussion and discuss how their system overcomes them.
3) The authors should make it clear throughout that their proposed system is addressing the non-surgical management of patients with spinal pain. Perhaps add ‘non-surgical’ in the title.

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)
None

Discretionary Revisions (which the author can choose to ignore)
None

What next?: Unable to decide on acceptance or rejection until the authors have responded to the major compulsory revisions

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.