Reviewer’s report

Title: Use of a Cybex NORM dynamometer to assess muscle function in patients with thoracic cancer

Version: 1 Date: 25 November 2007

Reviewer: Alison Hazel McGregor

Reviewer’s report:

General
With respect to the relevance of this work to the field of palliative care I am unable to comment as this is not my field. However, I found this area very interesting.

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

I wonder if you can comment on why you have chosen to focus on the leg/thigh muscles for testing muscle performance I am assuming ease and the fact that the quadriceps are a large muscle group vulnerable to wasting but perhaps you need to state this.

Also why have you chosen to look at endurance rather than fatigue, perhaps its my naivety of this field but I would have thought strength is the measure of muscle function change that is most likely to change in this patient group followed by fatigue.

In the methods I feel I need more detail of how you assessed acceptability particularly having experience of athletes tolerance of this system

When you were testing repeatability did you ensure that the dynamometer set up was identical on each occasion ie position of chair, angle rotation length of lever arm etc. Also what advice did you give subjects between test sessions.

In the measures of peak torque did you use average over the 25 repetitions or maximal measure obtained?

My concept is that endurance is the time period a constant force output can be maintained so I have some difficulty getting my head around the terms absolute and relative although I suspect this are measures generated by the software. Absolute endurance is more work performed in my thinking but I may be wrong.

Fatigue being an exercise induced reduction in maximum voluntary output may have been a better measure - perhaps something for the discussion.

In the methods why did you choose 25 repetitions at 180 degrees per second?
Paragraph 2 of the discussion in some ways I am not surprised that your patient group had higher endurance perhaps this is a reflection of how they "battle" and get on with their disease and as they have to go on and have greater mental strength they are better at endurance tests - but as I said at the start this is not my field so please judge accordingly.

I think some of your findings with respect to between group comparisons are underpowering and you indicate this in the discussion.

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

Discretionary Revisions (which the author can choose to ignore)

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

Level of interest: An article of importance 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