Reviewer's report

Title: Relationship between CTX-II and patient characteristics, patient-reported outcome, muscle strength and rehabilitation in patients with a focal cartilage lesion of the knee A prospective exploratory cohort study of 48 patients

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Reviewer: Sally Roberts

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This manuscript describes the study of a urinary biomarker, CTX-II, a breakdown product of type II collagen, in a population of patients who have undergone a 3 month exercise or rehabilitation programme, prior to being treated with autologous chondrocyte implantation. Results of this patient group were compared to a small group of ‘healthy’ adults.

It is an interesting study which appears to have been carefully performed; there are many studies of biomarkers in patient groups with other degenerative joint disorders but little has been done in this cartilage repair group. Hence there is certainly novelty value in the study and I would recommend its publication.

There are some relatively small points which might improve it a little.

1. How do the authors define osteoarthritis (page 4) for the purpose of excluding patients from the study? Is it the presence of any osteophytes, however, big and/or the loss of a certain measurement of joint space or some other way?

2. Last line, page 5: presumably a ‘x’ is missing when describing the dilution required (ranging from 1-50)?

3. Page 7: Was any attempt made to record the level of activity of the control group, eg did they undertake regular sport or training or have a manual or sedentary job? This could be interesting given the results seen in the patient group in response to exercise. (Ideally this group would have undergone the exercise regime also!)

4. It would be interesting to know the relative values found in this patient group in comparison to other studies with osteoarthritic changes. Perhaps this could be included in the Discussion, since there are many studies of this marker, particularly in OA.

The English would benefit from a little improvement but it does not hinder the interpretation of the science.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published
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.