Reviewer’s report

Title: Magnetic Resonance Tracking of Transplanted Autologous Bone Marrow-Derived Mesenchymal Stromal Cell in Chronic Spinal Cord Injury at Upper Cervical Level: Case Report

Version: 3 Date: 16 November 2014

Reviewer: José María M García Santos

Which of the following best describes what type of case report this is?: Other

If other, please specify:

Unreported tracking of medications

Has the case been reported coherently?: Yes

Is the case report authentic?: Yes

Is the case report ethical?: Yes

Is there any missing information that you think must be added before publication?: No

Is this case worth reporting?: Yes

Is the case report persuasive?: No

Does the case report have explanatory value?: Yes

Does the case report have diagnostic value?: No

Will the case report make a difference to clinical practice?: No

Is the anonymity of the patient protected?: Yes

Comments to authors:

- In my opinion, you should focus the paper entirely on the use of SPIO as tracker of the stem cell migration in a human being. It does not make sense discussing the feasibility and secondary effects as you could not split up those referred to the stem cells and those related with the labelling particles. What it can be concluded is just the fact the patient did not significantly change the previous clinical state. You can not raise any conclusion regarding the feasibility; you would need a larger sample.
- The introduction and discussion should then be shifted to the use of SPIO and significantly less to the stem cells, there are other papers reporting on samples of injected patients but not with labelled cells.

- Why is important tracking the stem cells from a clinical point of view? It seems to me it is important from a research point of view. Clinically, if the intrathecal injection is successful, you might not need tracking the cells.

- One of the main problems of the paper is that histological confirmation is lacking. Therefore, we cannot definitely assume that we are seeing the labelled stem cells at the cervical spinal cord. That is not clear in my opinion.

- Even if we accepted that the low signal focus is related to the labelled stem cells, again we cannot assume they grafted. The low signal is on the cord surface, not within. Moreover, more than “fading” at two weeks, it is not clear you are visualizing that low signal anymore after the second day. So, I don’t feel the paper could be focused on “migration” and “grafting”. Discussion should be focused on the problems of imaging with labelled stem cells, why labelled cells could fade, what the problems of visualization.

- There are statements in the introduction and discussion that need references’ support.

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

Quality of written English: Not suitable for publication unless extensively edited

Declaration of competing interests:  
I declare that I have no competing interests