Reviewer’s report

Title: Transplantation of fresh isolated adipose-derived stromal vascular fraction cells onto collagen elastin matrices: a possible clinical tissue engineering approach for soft tissue reconstruction

Version: 3 Date: 2 October 2013

Reviewer: David Lumenta

Reviewer’s report:

The authors report on fat cell harvest from ten healthy patients with successive in-vitro application on a collagen matrix of bovine origin, and present their results of a "simulated intra-operative situation in vitro without further expansion of isolated cells".

The research question, its methods and the results are well described.

Major Compulsory Revisions:

Why have they chosen an in-vitro/ex-vivo approach? Was it to determine the best interval, when considering an adipose tissue transfer with a timely delay (eg. patient -> lab -> patient)? However, when choosing a delay involving lab facilities, why did the authors not attempt to process the fat cells, as this might be the only advantage vs. a direct fat transfer in the same operating session? Is this experiment really clinically relevant, and if so under which circumstances? Why submit a patient to two operations? Autologous fat cell transfer in one simultaneous operation has a significantly higher survival in an "autologous in-vivo bed" as compared to an in-vitro environment.

The authors discussed other publications relating to this subject (eg. Ref 7), but failed to introduce them at the beginning, when relevant for formulating the research question. It is not clear, what this work distinguishes from previous publications? I suggest to focus on the methodology in the introduction section, instead of discussing it as performed in the discussion only. What makes the chosen methodology stand out as compared to previous approaches?

This paper is probably most suited for a scientific journal focusing on experimental methodology.

The authors need to provide a statistical analysis of their experimental results: eg. 1 hrs vs. 3 hrs vs. 1 day. No statistical analysis was presented in the manuscript.

Minor Essential Revisions:

References:

Please follow the relevant citation policy of each respective journal (journal abbrev. year and page numbering etc.):
The reference list invariably used either full journal titles (eg. 1, 12 14 ), abbreviations, included typos (9), and an incoherent application of year denominations (eg. 9 vs 10, 17, 19 vs 5 , 6, 7).

**Level of interest:** An article of limited interest

**Quality of written English:** Acceptable

**Statistical review:** Yes, and I have assessed the statistics in my report.

**Declaration of competing interests:**

I declare that I have no competing interests.