Reviewer's report

Title: Revascularization of onlay autogenous iliac grafts for lateral alveolar ridge augmentation.

Version: 2 Date: 4 October 2013

Reviewer: Johannes Kleinheinz

Reviewer's report:

In their article the authors claim to evaluate revascularization processes in autologous bone grafts from the iliac crest to the alveolar ridge.

The manuscript offers several substantial flaws.

Core statement

The analysis of a mean vessel density as well as a morphological evidence of tubular vascular structures is not performed. When it comes to evaluating the (re-)vascularization of any tissue, the presence of vWF alone is no sufficient prove at all. Next to endothelial cells, vWF can also be detected in thrombocytes or megacaryocytes.

This manuscript focuses on vascularization, however vessel structures are not attested by one single experiment in this setting.

The authors should include a thorough IHC detection of vascular structures followed by a systematic analysis of mean vessel density to seriously talk about vascularization. Otherwise the title 'Immunohistochemical detection of vWF after onlay autogenous iliac grafts for lateral alveolar ridge augmentation' might be more suitable.

In addition, the cells of the bony metabolism and the structures of the connective tissues are not identified immunohistochemically either (Fig. 4).

Critical scrutiny of the results

2 of the initial 12 animals of group 2 were excluded due to infection. The authors should discuss or better refute the probable possibility that the increase of vWF might be reducible to a local infection in the included animals.

Conflict of interest

The fact that a reviewer declares no competing interest in commenting on this outstanding piece of research while being an active member of the work group is a slap in the face of everyone who is able to spell the words 'good laboratory practise' and does not exactly fit the procedural standards of a peer reviewed journal.

If one tends to accept the manuscript for publication nevertheless, the major revisions from 7 September 2013 must be fully realised:
1. Title.
This is a study comparing onlay bone grafts alone with onlay bone grafts in combination with DBBM and GTR. Among other things, the study looks at ingrowth of vasculature and connective tissue. It is not primarily a study of revascularization in onlay autogenous bone grafts. The title should reflect the true nature of the study.

2. Abstract.
The abstract needs to be rewritten to adequately discuss the experimental groups and findings. Only Experiment 2 is discussed in the abstract.

3. The authors state they did not study onlay grafts with guided bone regeneration alone (the graft covered by a collagen membrane) because this was “described by Adeyemo et al. from our study group previously in the same experimental setting.” This work is cited in the manuscript, but the close association with the current study is not discussed. The current study is actually an extension of the earlier work, and this should be made quite clear.

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.'