Reviewer’s report

Title: Toxicity of insulin-derived amyloidosis: a case report

Version: 0 Date: 16 Apr 2019

Reviewer: Kabirullah Lutfy

Reviewer's report:

The current manuscript is a case report where in five diabetic patients receiving insulin treatment for 12 - 25 years, the authors found amyloidosis at the site of insulin injection. Among the five cases studied, all subject had this type of condition; however, only case 5 who was a younger male with one of the leg amputated had a form of toxic amyloidosis since the authors showed that it caused cell death in both types of cell used compared to control group in which tissue was taken from the dermis, epidermis and subcutaneous tissues. Overall, the paper is well written and the results are of interest to the readers of the journal. However, there are issues that need to be addressed.

Major:

1. There is no control group for each case and it is not clear what makes the control group. Is it pooled data for all cases or just all were compared against control of case 5?

2. The duration of insulin treatment, the sex of subject and their age vary in some cases significantly (58 years vs. 82 years). However, the authors did not discuss this as a factor affecting the result. Importantly, the dose of insulin and effectiveness insulin in each patient should be provided and discussed so the readers can have a better idea.

3. The data seem to be a candidate for one-way ANOVA not student's t test.

4. Were necrotic tissues cleaned when the materials collected for each case? Would the presence of necrotic tissue cause toxicity to these cells?

Minor

If possible, have a legend for figure 1, please include case 2 and case 5 on the top for A-D and case 5 for E-H and on the left or right of each panel, Congo Red, Polarized Field, Insulin immunostaining and amyloid protein from the top to the bottom, respectively.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English
Please indicate the quality of language in the manuscript:

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