Reviewer's report

Title: Diffusion Tensor Changes Correlate with Lesion Volume in Right Cerebral Hemisphere Infarctions

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Reviewer: Eduardo M. Castillo

Reviewer's report:

This is correlational study testing the relation between lesion volume and DTI-derived metrics of lesional and perilesional white matter. Is a longitudinal study conducted in 33 stroke patients with imaging before and after intervention.

- Minor Essential Revisions.

Title. The title suggest that this finding is specific of Right hemispheric lesions. The term “right” is unnecessary in the title since can lead to wrong assumptions.

Pg2. when they say “lesion volume and abnormalities in diffusion tensor imaging are individually associated with poor prognosis” it probably should say “are independently associated with poor prognosis” since the main aim of the study is to test their relationship.

Pg. 2 “This study assesses the correlations between large lesion volumes and diffusion tensor imaging”. Correlation is a term that can be used for two variables like volume and MD or area and FA; but not for a variable like area and a procedure DTI.

Pg2. Methods. The authors describe: “The effects of therapy were assessed”. At this point they should mention the type of therapy. There should be a reference to the study of therapy effects in the background if it is part of the method.

Pg 2. Methods. The authors describe: “values were measured at the site of the lesion and selected white matter tracks”. Later (in page 6) the lack of concreteness continues since ROIs were defined in 13 locations but authors only describe 4 structures in their methods.

Pg 4. Authors describe the exclusion criteria including “previous lesion in the left hemisphere or the right hemisphere found on acute CT”….why not just saying previous lesion on the brain?

Pg 6. Figure 2. The square shaped ROIs in figure 2 seem to have different area from LH to RH. How that can affect the results?

- Discretionary Revisions
The question posed by the authors is not well defined from the get go (abstract and introduction). Writing can be improved.

Approach and results do not differ from previous reports proving that FA values are lower in lesional and perilesional zones following stroke.

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

**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.