Author's response to reviews

Title: Controversial significance of early S100B levels after cardiac surgery.

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Author's response to reviews: see over
Dear editor;

Thank you very much for your review of the article. We have read the reviewers comments and have made changes were possible. Below is a structured list of comments.

Andersson – Compulsory Comments

1. As Andersson points out S100B levels at T0 is probably a sum of extracerebral and cerebral S100B. However, we do not now the relation between the two in each individual, and therefore we made the assumption that all S100B at this time-point is extracerebral to avoid having any extrecerebral S100B int later levels after correction. A paragraph has been added to clarify this stand-point.

2. Andersson seeks a primary end-point and a sample size to fit that end-point. This study is by nature a detailed study of the kinetics of S100B after cardiac surgery. We have included many sampling intervals, to be follow the quick kinetics of S100B after cardiac surgery. We wanted to explore any correlation between S100B levels and neuropsychological outcome. The data from this study could be used to designing a novel study with a more specific end-point, and also help to calculate sample size accordingly. It is, however, difficult for us to redesign the study and increase the number of patients at this time.

3. Informed consent was obtained from all patients. Given the fact that they had to undergo 2 times 60 minutes of neuropsychological test, there complete cooperation is a necessity, and all patients were well informed to obtain such compliance. We have clarified this in our method section.

Andersson - Minor Essential Revisions

1. We have added a reference to one of our older articles to clarify the method of standardizing impairment scores.

2. Andersson raises the issue of how presenting spread of data. I believe that using confidence intervals is a very good method of reporting CI, especially if describing odds and risk ratio. Andersson seeks for confidence interval in proportions. However, the only true propotions we present are the number of patients suffering a decline, i.e 80.4% which represents 45 of 56 patients. To use a confidence interval here would not give any valuable information, since the standard deviation in proportion is a calculated value.

To present skewed data in large study can sometimes be a problem. A max-min range will give a false impression of a very wide-spread if there is one outlier. We used the standard deviation method, because is well known, and have been used extensively of S100B research throughout the years. It is therefore a measure that can be used to compare findings from different groups.
**Andersson - Other**

A person who has American English as her native language have helped us with the language in the manuscript.

As for the other reviewer, no comments were made, and we have therefore not made any changes.