Author's response to reviews

Title: Lewy body with dementia versus Nonconvulsive status epilepticus in the diagnosis of a Patient with Cognitive dysfunction, Complex visual hallucinations and Periodic abnormal waves in EEG: A case report

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Author's response to reviews: see over
Dear reviewers:

I have submitted a case report entitled “A Patient with Cognitive dysfunction, Complex visual hallucinations and Periodic abnormal waves in EEG: Nonconvulsive status epilepticus or Lewy body with dementia?” to ”BMC Neurology”.

There were some valuable suggestions from two reviewers, and I have made some revisions according to the suggestions by point to point.

**Reviewer 1:**

1. As the authors mentioned, EEG finding observed in DLB changes overtime in the pathological course. Did the authors observe some EEG change in this patient through the following period?
   
   R: Thank you very much. However, after her admission, we have found that her EEG showed PSD, and out of hospital, she has a poor condition, her husband refused to take EEG again, So, I’m regretful that we haven’t obtained her initial phase EEG and final phase EEG.

2. REM sleep behavior disorder is often observed in patients with DLB/PD before or after onset of these disorders. Did the patient have complaint of nocturnal dream-enactment behavior?
   
   R: Thank you very much. The patient’s husband haven’t described the symptoms of RBD, such as nocturnal dream-enactment abnormal behavior.

3. The patient had visual hallucination. Patients with DLB are likely to show impaired visuospatial function. Did the authors conduct neuropsychological test battery other than MMSE?
   
   R: Thank you very much. I have added the neuropsychological test result to the revised manuscript in red mark, such as “Comprehensive neuropsychological testing was performed. She has a lower operating score than language score, which may indicated the impaired nondominant hemisphere function associated with visuospatial function, especially, poor performance on visual recognition, visual regeneration and picture recall”

4. It would be better to rephrase the “EEG recordings” to “EEG findings”?
   
   R: Thank you, I have changed “EEG recordings” to “EEG findings” in red mark.

**Reviewer 2:**

1. Need to define "periodic synchronous discharges". I believe there are agreed EEG criteria for these. Depending on the stringency of definition, there may or may not be confusion with the periodic sharp wave complexes typically seen in sporadic CJD (see Ann Neurol 2004;56:702-8)

   R: Thank you very much. Periodic synchronous discharges are defined as periodic complexes
occupying at least 50% of a standard 30-minute EEG, in a symmetric, diffuse and synchronous manner (although they may be more prominent in a given region, frequently the anterior regions) and have a periodicity less than 4.0 seconds. However, the strict criteria for the definition of PSWC in CJD may possibly suggest the duration 100–600 ms, the intercomplex interval 500–2000 ms, which may possibly assist the differentiation.

The definition of PSD has been described in the part of discussion in green mark!

2 Background: "DLB has a much higher mortality" - than CJD?!

R: Thank you. In my opinion, “DLB has a much higher mortality than other central nervous system diseases” not than CJD, which has been revised in green mark in the background.

3 Minor revisions:
"myoclonic jerk" to read "myoclonic jerks".

Abstract, Background: "Lewy body" to read "Lewy bodies".

R: Thank you very much. I have revised these words in green mark.

4 Discretionary revisions:
I would shorten the title to something a little more catchy, e.g. "Periodic EEG: what is the diagnosis?"

R: Thank you very much, however, my title has been described as this, because of the Title Templates in BMC Neurology.

The difficulty in differentiating DLB and CJD is also discussed in Clin Neurol Neurosurg 2008;110:194-7 which might be worth referencing

R: Thank you very much, this reference has been referenced in the discussion part in green mark as reference 1.

Both two reviewers:

Quality of written English: Needs some language corrections before being published

R: I have checked the revised manuscript carefully and asked for a help in correction from a foreigner friend, the revision has been marked in blue.