Author's response to reviews

Title: Neurosyphilis presenting with unusual hippocampal abnormalities on MRI and PET scans: a case report

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Author's response to reviews:

Prof Michael Kidd AM, Flinders University, Australia
Editor –in-Chief
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Author's response to the reviewers’ comments

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Dear Prof Kidd AM;

We thank the reviewers and the associate editor for their relevant and useful comments. In this document; we quote in bold face statements from the reports. Our replies follow in ordinary print. The figures have been changed to reflect this and appropriate formatting changes have been made as per editor’s instructions.

Many thanks for your consideration of this original case report for publication.

Reviewers’ comments and responses:

Reviewer 1:
1) Clean up the paper’s language. For example, the last two sentences of the abstract’s case presentation may be combined. Also, there is improper use of the semicolon in the second paragraph of the body’s case presentation.

Response
The papers language has been reviewed taking above comments into
2) The discussion should list differentials for both the MRI and PET findings.

Response

Bilateral mesial temporal lobe hyperintensity may be seen on T2 weighted MR sequences in a range of acute or chronic conditions. Acute hyperintensity may be seen in herpes simplex encephalitis, paraneoplastic limbic encephalitis, vasculitis and status epilepticus. Chronic hyperintensity along with atrophy is commonly seen in mesial temporal sclerosis and neurodegenerative disorders. In this case the finding of increased 18F-FDG uptake in the hippocampus on the PET scan gave rise to concerns about ongoing focal seizures in the right hippocampus, however, the EEG was completed within 2 hours of the PET scan and showed no evidence of epileptic discharges (please refer to the discussion section of the case report).

3) Include guidelines on when to test for neurosyphilis and what testing is appropriate.

Response

CSF examination is recommended in all patients with untreated syphilis of unknown duration or of duration greater than 1 year. The diagnosis of neurosyphilis is based on a CSF WBC count of 20 cells/µL or greater, and/or a reactive CSF VDRL, and/or a positive CSF intrathecal T pallidum antibody index. Other CSF abnormalities include elevated protein levels and pleocytosis, which are found in up to 70% of patients. In addition, the CSF VDRL result is reactive. Some experts advise lumbar puncture in secondary and early latent syphilis. This is because standard penicillin G benzathine therapy for early syphilis does not achieve treponemicidal levels in the CSF.


4) Include the dosing and duration of treatment with PCN used in this case.

Response

This patient was treated with Penicillin G procaine 2.4 million units IM daily plus probenecid 500 mg four times daily oral, both for 14 days. This information has been added to the case report.

5) Include the time interval between pre-/post-treatment MRI/PET.

Response

Both MRI and PET scans were repeated after two months of finishing the penicillin course.

Reviewer 2:
The only comment is that the authors should use arrows to point out the abnormalities on the images.

Response
Arrows have been added to the images pointing out the abnormalities.

Thank you again.

Sincerely,

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