

Editor Wang. NO.: 72753

Title: Overlapping syndrome of recurrent anti-N-methyl-D-aspartate receptor encephalitis and anti-myelin oligodendrocyte glycoprotein demyelinating diseases: a case report

World Journal of Clinical Cases

Dear editor Wang:

Thank you very much for your letter and comments concerning our manuscript. All those comments are valuable and very helpful for improving our paper. We have endeavored to revise the manuscript according to the reviewers' suggestions and would like to re-submit it for your consideration. The amendments are marked in red in the revised manuscript and point by point responses to the reviewers' comments are outlined in this letter.

We would like to express our great appreciation to the reviewers for comments on our paper. We hope that the revised manuscript has adequately addressed reviewers' concerns and would be suitable for publication. We look forward to hearing from you regarding the suitability of the manuscript for publication in World Journal of Clinical Cases.

Thank you and best regards.

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Reviewer #1:

Scientific Quality: Grade B (Very good)

Language Quality: Grade A (Priority publishing)

Conclusion: Accept (High priority)

Specific Comments to Authors: Dear author, thank you for submitting your case report in the journal. Anti NMDAR encephalitis is very rare entity. Close observation and ruling out of the other common and relevant cause of encephalitis are very important.

Response: Thank you for these constructive comments.

Encephalitis is a neurological disorder caused by diffuse or multiple inflammatory lesions of the brain parenchyma. Among them, autoimmune encephalitis generally refers to a type of encephalitis mediated by autoimmune mechanisms. At present, the proportion of autoimmune encephalitis accounts for 10% -20% of encephalitis cases, of which anti-NMDAR encephalitis is the most common, accounting for about 80%. Autoimmune encephalitis should be differentiated from central nervous system infections caused by herpes simplex encephalitis, epidemic encephalitis B, neurosyphilis, bacteria, fungi, and parasites, Creutzfeldt-Jakob disease, and the presence or absence of opportunistic infectious diseases associated with immunosuppressive agents or anti-tumor. Cerebrospinal fluid antibodies were negative in the acute phase of the above infectious diseases. In this case, relevant examinations such as cerebrospinal fluid cytology, culture, virus, antibody, cranial MRI, electroencephalogram, tumor screening (tumor markers, chest CT, scrotum, both kidneys, hepatobiliary b-ultrasound), and PET-CT were perfected for differential significance. In this paper, we report a young man who initially presented with headache, fever, and epilepsy as the first symptoms, followed by behavioral abnormalities, intellectual decline, dyskinesia, and decreased

autonomic function, in accordance with the course of "bimodal encephalitis" reported in the literature (3). Combined with cerebrospinal fluid NMDAR antibody (+) 1:10, EBV viral capsid antigen antibody IgG (+), negative tumor screening program and other examinations, it was considered to be anti-NMDAR secondary to non-tumor viral encephalitis. **The disadvantage of this case is that mNGS was not further refined to identify the presence of other bacterial or viral infections.**

Reviewer #2:

Specific Comments To Authors: The authors reported a case of recurrent anti-N-methyl-D-aspartate receptor encephalitis overlap with anti-myelin oligodendrocyte glycoprotein demyelinating diseases, which is rare and interesting. This case report is novel and of some significance to the clinical field, attracting the attention of readers. The structure and content of the article are complete. However, the number of total references is few, maybe a little more related references could also be cited. **Scientific Quality: B Language Quality: A Recommendation: General accept**

Response: Thank you for these constructive comments. I added the following references.

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7 **Graus F**, Titulaer MJ, Balu R, Benseler S, Bien CG, Cellucci T, Cortese I, Dale RC, Gelfand JM, Geschwind M, Glaser CA, Honnorat J, Höftberger R, Iizuka T, Irani SR, Lancaster E, Leypoldt F, Prüss H, Rae-Grant A, Reindl M, Rosenfeld MR, Rostásy K, Saiz A, Venkatesan A, Vincent A, Wandinger KP, Waters P, Dalmau J. A clinical approach to diagnosis of autoimmune encephalitis. *Lancet*

Neurol 2016; **15**: 391-404 [PMID: 26906964 DOI: 10.1016/S1474-4422(15)00401-9]

8 **Dalmau J**, Armangué T, Planagumà J, Radošević M, Mannara F, Leypoldt F, Geis C, Lancaster E, Titulaer MJ, Rosenfeld MR, Graus F. An update on anti-NMDA receptor encephalitis for neurologists and psychiatrists: mechanisms and models. *Lancet Neurol* 2019; **18**: 1045-1057 [PMID: 31326280 DOI: 10.1016/S1474-4422(19)30244-3]