Reviewer’s report

Title: Passively transferred human NMO-IgG exacerbates demyelination in mouse experimental autoimmune encephalomyelitis

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Reviewer: Bianca Weinstock-Guttman

Reviewer’s report:

The authors provide a model of MOG EAE that following passively intraperitoneal injection with human NMO IgG showed a more severe clinical dysfunction and larger subpial demyelinating lesion as compared to EAE MOG injected with a control IgG (not NMO ) and much more than the vehicle EAE group.

Interestingly a temporary worsening was seen in the group with IgG injection as compared to the vehicle MOG EAE group but not at the degree and length as compared to the NMO IgG transfer.

Comments:

1. The final volume of demyelinated lesions were actually similar in all the 3 groups. Not clear therefore the underlying pathology that was responsible for the persistent worse clinical status in the NMO transferred group. A better explanation as considering a more axonal damage, ischemic events while affecting more the subpial area? Not clear why the more deeper lesions (as seen in the control group) would be less clinical dysfunctional than the subpial lesions. The more affected ventral cord areas vs. the lateral maybe actually more relevant.

2. A better explanation/relation between the more subpial location found in the NMO group and the temporary increase in granulocyte accumulation is desirable.

3. Although limited data on the clinical relation between NMO levels is available, the authors did not mentioned the reference “Mult Scler. 2008 Sep;14(8):1061-7” showing a relation between disease activity and presence of NMO IgG and the possibility of complete reversal (negative status) in patients with stabilized clinical status on immunosuppressive therapy.

Level of interest: An article of importance in its field

Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests: 

'I declare that I have no competing interests' below. If your reply is yes to any,
please give details below.