Reviewer's report

Title: Monthly i.v. methylprednisolone in relapsing-remitting MS - Reduction of enhancing lesions, T2 lesion volume and plasma prolactin concentrations

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Reviewer: hans-peter hartung

Reviewer's report:

In the present manuscript Then-Bergh and co-workers studied the impact of monthly intravenous methylprednisolone in 9 patients with relapsing-remitting multiple sclerosis. The authors report a decrease in the number of Gd enhancing lesions/scan, a decrease in the T2 lesion volume, and a decline in the plasma prolactin level. The authors conclude that monthly IVMP reduces the inflammatory activity in MS and suggest that IVMP could be a “component for combination therapy”.

It is not surprising to see that T1-weighted MRI reveals a reduction of Gd+ lesions if the time interval between the last application of IVMP and the MRI is within 30 days. Our current understanding suggests that IVMP may influence Gd enhancement somewhere between 4 and 6 weeks. Thus, the reported decrease in inflammatory activity is a direct effect of IVMP, however, it is much more important to know if this treatment translates into any clinical efficacy. Therefore the following questions remain and need to be addressed:
- what was the effect on the relapse-rate? Few relapses are reported; did they occur in different patients and what happened to the individual patient?
- Did the authors obtain additional data besides the EDSS, e.g. MSFC?
- How did the number of T2 lesions/ T2 lesion load change?

Further comments:
- What was the time interval between the administration of Gd-DTPA and the next MRI sequence?
- Was the MRI protocol comparable to the data set from the Sylvia Lawry center? In most clinical trials the MRI protocols differ from routinely applied MRI procedure.
- At what time during the day were blood samples obtained? Was there a strict protocol to make sure that intra-day variability could be excluded for endocrinological testing?
- The link to the Sylvia Lawry Centre appears to be incorrect (“File not found”).
- The conclusion that monthly IVMP would be a good candidate for combination therapy is pure speculation – the present data do not provide enough support for this notion.

Major Compulsory Revisions (that the author must respond to before a decision on publication can be reached)
see above: provide info on RR, EDSS, MSFC, T2LL, T2LN; interval IVMP - Gd application; comparison to trial MR protocols; give time of day for sampling

Minor Essential Revisions (such as missing labels on figures, or the wrong use of a term, which the author can be trusted to correct)

Discretionary Revisions (which the author can choose to ignore)
What next?: Reject because too small an advance to publish

Level of interest: An article whose findings are important to those with closely related research interests

Quality of written English: Acceptable

Statistical review: No

Declaration of competing interests:

I declare that I do not have competing interests