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Letter to the Editor

The Usefulness of OCBs and the IgG Index for the Diagnosis of Demyelinating Diseases needs to be Confirmed by Appropriate Studies

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We were interested to read the article by Vanderschieden *et al*. on a retrospective observational study of patients with pediatric multiple sclerosis (POMS) and other pediatric demyelinating diseases of the central or peripheral nervous system diagnosed between March 2022 and May 2023 with regard to CSF IgG index and oligoclonal bands (OCBs) [1]. Both cohorts were small and very heterogeneous, so a comparison between the two may not provide reliable results [1]. Nevertheless, it was concluded that in pediatric hospitals without dedicated OCB determination, the IgG index should be determined as a surrogate marker for pediatric demyelinating diseases [1]. The study is impressive, but several points need to be discussed.

The first point is that the group size in both the demyelination and non-demyelination groups is too small to draw general conclusions as in the index study [1]. Before the conclusion can be drawn that the IgG index replaces the determination of OCB in pediatric clinics without dedicated OCB determination, the study needs to be repeated including larger and more homogeneous groups. Both the control and the verum group were very heterogeneous, which makes interpretation of the data difficult.

The second issue is that patients with POMS (n=12) were not compared with those with MOGAD (n=8) in terms of age, gender distribution, IgG index, OCBs and outcome [1]. As the study aimed to investigate the usefulness of the IgG index and OCBs, it would have been interesting to know whether these parameters were able to differentiate between these two groups. Was there any difference at all between these two groups?

Third, it is incomprehensible why patients with Guillain-Barre syndrome (GBS), chronic inflammatory demyelinating polyneuropathy (CIDP) and Charcot-Marie-Tooth disease were included in the cohort with demyelinating diseases. These patients should be excluded from further investigation, especially the Charcot-Marie-Tooth patients, as OCBs are usually negative in these patients [2].

The fourth point is the inclusion of two patients with transverse myelitis [1]. Transverse myelitis is multicausal and can be infectious or immunologic [3]. How could the authors be sure that the transverse myelitis in the two included patients was demyelinating in nature and not caused by infectious agents? We should also be informed whether the MRI of the brain in these two patients was really normal.

The fifth point is that no explanation was given as to why the IgG index was elevated in a psychiatric patient [1]. Did this patient have a demyelinating cerebral disease in addition to his psychiatric disease? Did all patients in the non-demyelinating cohort also undergo cerebral imaging?

The sixth point is that the term “chronic, idiopathic, demyelinating polyneuropathy” is not known in the literature. Do the authors mean chronic inflammatory demyelinating polyneuropathy (CIDP)? If a CIDP patient was indeed included, it should be clarified whether the CIDP was actually a nodopathy and whether antibodies against neurofascin and contactin were negative.

In summary, this interesting study has limitations that put the results and their interpretation into perspective. Addressing these limitations could strengthen the conclusions and corroborate the study's message. General conclusions about the usefulness of OCBs and the IgG index for the diagnosis of demyelinating diseases in pediatric patients need to be confirmed in a larger, prospective, multicenter study, which has not yet been conducted.

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References

1. Vanderschelden RK, Benjamin NL, Shurin MR, Shelton L, Wheeler SE. Clinical laboratory test utilization of CSF oligoclonal bands and IgG index in a tertiary pediatric hospital. Clin Biochem. 2024; 131-132:110803. Doi: 10.1016/j.clinbiochem.2024.110803.
2. Ruiz M, Puthenparampil M, Campagnolo M, Castellani F, Salvalaggio A, Ruggero S, *et al*. Oligoclonal IgG bands in chronic inflammatory polyradiculoneuropathies. J Neurol Neurosurg Psychiatry. 2021; 92(9):969-974. Doi: 10.1136/jnnp-2020-325868.
3. Grasso EA, Pozzilli V, Tomassini V. Transverse myelitis in children and adults. Handb Clin Neurol. 2023; 196:101-117. Doi: 10.1016/B978-0-323-98817-9.00020-X.