QUALITY ASSESSMENT OF N-METHYL-D-ASPARTATE RECEPTOR IGG ANTIBODY TESTING IN THE ABSENCE OF AN EXTERNAL PROFICIENCY TESTING PROGRAM

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ABSTRACT

The overall inter-laboratory qualitative agreement for the detection of NMDAR Igg antibodies was excellent at 98.6% (Tables 1 and 2).

Conclusion:

The positive (98.1%) and negative (100%) agreements were very favorable (Table 2).

Of the 52 positive samples identified at ARUP Laboratories, one was reported negative when tested at the Institute for Experimental Immunology affiliated to Euroimmun.

This single discordant specimen was originally reported as positive with a titer of 1:10 at ARUP Laboratories. Upon re-evaluation at ARUP it was negative. With further evaluation for IgM and Igg NMDAR antibodies at Euroimmun, this specimen tested positive for all two isotypes. Due to the initial low positive result for NMDAR Igg and the presence of IgM and Igg antibodies, it is very likely that this specimen had undergone degradation.

Based on our analysis of the quantitative results for the positive samples, end-point titer distribution was similar for 32 of 51 (62.7%). For these samples, the titres were within two dilutions.

The increased variability in the low and high antibody levels may be explained by the differences in dilution and interpretation of fluorescence signal between titers.

Our study is not without limitations, notably the lack of clinical information for all patients.

Internal and external proficiency programs rely on the use of previously screened as well as properly de-identified and stored samples for the analytes under investigation.

Access to clinically defined specimens are optimal as this information is important in resolving discordant results.

Overall, this data presents a positive outlook for the clinical use of NMDAR Igg by IFA. It also documents post-validation consistency in test performance and sets the stage for a more formal inter-laboratory testing for ‘orphan’ autoimmune disease serologic tests.

REFERENCES


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ACKNOWLEDGMENTS

We acknowledge the contributions of the Amgen Immunology technical staff of ARUP Laboratories, Inc. and the Institute for Experimental Immunology, affiliated to Euroimmun. Kifs for repeat testing evaluation at ARUP were donated by ARUP Laboratories. Kifs for testing at the Institute for Experimental Immunology were donated by Euroimmun. This research was funded by the ARUP Institute for Clinical and Experimental Pathology, Salt Lake City and the Institute for Experimental Immunology, affiliated to Euroimmun.