

SERUM ANTI-GQ1b IgG ANTIBODY IS ASSOCIATED WITH OPHTHALMOPLEGIA IN MILLER FISHER SYNDROME AND GULLAIN-BARRÉ SYNDROME: CLINICAL AND IMMUNOHISTOCHEMICAL STUDIES

A. Chiba, S. Kusunoki, H. Obata, R. Machinami, and I. Kanazawa

Neurology 1993;43:1911–1917

To determine the significance of serum anti-GQ_{1b} IgG antibody, we studied the disease spectrum associated with this antibody and GQ_{1b} epitope in the human nervous system. We examined sera from 19 patients with typical Miller Fisher syndrome (MFS), five patients with acute postinfectious ophthalmoplegia without ataxia (atypical MFS), six patients with Guillain-Barré syndrome (GBS) with ophthalmoplegia (GBS-OP[+]), and 23 patients with GBS without ophthalmoplegia (GBS-OP[-]). We also examined sera from 84 patients with other neurologic or non-neurologic disorders and from 16 normal control subjects. Eighteen of the 19 patients with typical MFS, all the patients with atypical MFS, and five of the six patients with GBS-OP(+) had increased anti-GQ_{1b} IgG activity in ELISA, but none of the patients in the other groups, including GBS-OP(-), had it. All the patients' sera that had anti-GQ_{1b} IgG antibody showed anti-GT_{1a} IgG activity. Results of absorption studies suggested that the same antibody reacted with GQ_{1b} and GT_{1a}. An anti-GQ_{1b} mouse monoclonal antibody immunostained the paranodal regions of the extramedullary portion of the human oculomotor, trochlear, and abducens nerves. Biochemical analysis showed that the human oculomotor nerve contained a larger amount of GQ_{1b} than did the ventral and dorsal roots of the spinal cord. We conclude that serum IgG antibody against GQ_{1b} is very closely associated with acute postinfectious ophthalmoplegia in MFS and GBS.

Free Access to this article at www.neurology.org/content/43/10/1911

Comment from Richard M. Ransohoff, MD, Associate Editor: *An early demonstration that antibody specificity correlated to clinical phenotype in GBS variants.*

Neurology[®]

Serum anti-GQ1b IgG antibody is associated with ophthalmoplegia in Miller Fisher syndrome and Guillain-Barré syndrome: Clinical and immunohistochemical studies

A. Chiba, S. Kusunoki, H. Obata, et al.

Neurology 2011;77;676

DOI 10.1212/01.wnl.0000403773.60115.e5

This information is current as of August 15, 2011

Updated Information & Services

including high resolution figures, can be found at:
<http://n.neurology.org/content/77/7/676.citation.full>

Permissions & Licensing

Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
http://www.neurology.org/about/about_the_journal#permissions

Reprints

Information about ordering reprints can be found online:
<http://n.neurology.org/subscribers/advertise>

Neurology® is the official journal of the American Academy of Neurology. Published continuously since 1951, it is now a weekly with 48 issues per year. Copyright Copyright © 2011 by AAN Enterprises, Inc.. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

