

Results

NA.

Conclusions

Myeloradiculitis has been reported with anti-MOG disease but is not a typical finding for NMO. We report this case to highlight this unusual finding. In addition, sarcoma is an uncommon cause of paraneoplastic syndromes and to our knowledge, this is the first report of sarcoma being associated with paraneoplastic NMOSD.

Disclosure: Dr. Hussein has nothing to disclose. Dr. Samkutty has nothing to disclose. Dr. Durica has nothing to disclose. Dr. Anadani has nothing to disclose.

Missed Opportunities to Prevent N-methyl-D-Aspartate Receptor (NMDAR) Encephalitis in a DREAMer

Paul Crane, Matthew Jensen, Suzanne Liu, Justin Abbatemarco, Jana Wold, Holly Leydard, Umang Swami, Michelle Miranda, Stacey Clardy

Objective

Describe a case of NMDAR encephalitis in a young Latino male patient, additionally the factors resulting in delayed preventative and diagnostic medical care, which contributed to the development of a preventable case of NMDAR encephalitis.

Background

Adolescent undocumented immigrants in the United States face a history of prejudice and bias that perpetuates disparities and stigmas related to their healthcare. The lack of culturally informed practices among healthcare workers can create multiple lost opportunities to deliver standard of care practices, including routine testicular exams. The treatment of NMDAR encephalitis with immunotherapy, and resection of culpable tumors when present, can be lifesaving. Recognition of the germ cell tumor association has also renewed awareness of the importance of screening for such tumors.

Design/Methods

N/A.

Results

Case: A 25-year-old male who immigrated from Mexico to the U.S. at age 13 presented to the hospital for concern of status epilepticus. His past medical history included atypical developmental delay beginning in late teenage years. A large abdominal mass was identified on imaging as a stage IIIC (pT1bN0M1bS2) NSGCT (70% teratoma/30% seminoma) tumor arising from an unresected, undescended left testicle. Autonomic instability in the setting of this malignancy prompted an evaluation for, and diagnosis of, NMDAR encephalitis. His course was complicated by altered mental status, seizures, sympathetic storming, and orofacial dystonia. After tumor resection, and initiation of immune therapy, the patient showed a remarkable recovery.

Conclusions

This patient's preventive healthcare was impacted at multiple timepoints by changing political policies and a lack of culturally informed practices that unpredictably disrupted reliable access to medical care. Recognition of care gaps allows us to expand our differential diagnoses, and enact a comprehensive approach to fill in gaps. Effective communication, incorporating focused discussions within culturally sensitive frameworks, requires ongoing education for clinicians regarding the populations they serve to prevent disease and minimize health care disparities.

Disclosure: Dr. Crane has nothing to disclose. Dr. Jensen has nothing to disclose. The institution of an immediate family member of Dr. Liu has received research support from NIH. Dr. Abbatemarco has nothing to disclose. Dr. Wold has nothing to disclose. Holly Leydard has nothing to disclose. Dr. Swami has received personal compensation in the range of \$500-\$4,999 for serving as a Consultant for Seattle Genetics. The institution of Dr. Swami has received

research support from Janssen. The institution of Dr. Swami has received research support from Astellas/Seattle Genetics. The institution of Dr. Swami has received research support from Exelixis. Dr. Miranda has nothing to disclose. Dr. Clardy has received personal compensation for serving as an employee of Veterans Health Administration (VHA). Dr. Clardy has received personal compensation for serving as an employee of University of Utah Health. Dr. Clardy has received personal compensation in the range of \$0-\$499 for serving as a Consultant for Clarion. Dr. Clardy has received personal compensation in the range of \$500-\$4,999 for serving as a Consultant for ExpertConnect. The institution of Dr. Clardy has received personal compensation in the range of \$0-\$499 for serving as a Consultant for VialBio. The institution of Dr. Clardy has received personal compensation in the range of \$0-\$499 for serving as a Consultant for Genentech. The institution of Dr. Clardy has received personal compensation in the range of \$500-\$4,999 for serving as a Consultant for Alexion. The institution of Dr. Clardy has received personal compensation in the range of \$0-\$499 for serving as a Consultant for GuidePoint. Dr. Clardy has received personal compensation in the range of \$10,000-\$49,999 for serving as an Editor, Associate Editor, or Editorial Advisory Board Member for Neurology/AAN Publications. The institution of Dr. Clardy has received research support from Alexion Pharma. The institution of Dr. Clardy has received research support from Sumaira Foundation for NMO. The institution of Dr. Clardy has received research support from Immune Deficiency Foundation. The institution of Dr. Clardy has received research support from Western Institute for Veteran Research. The institution of Dr. Clardy has received research support from NIH/NINDS. Dr. Clardy has received personal compensation in the range of \$500-\$4,999 for serving as a AAN Summer Meeting CoDirector Travel and Lodging with AAN. Dr. Clardy has received personal compensation in the range of \$500-\$4,999 for serving as a Grand Rounds Travel and Lodging with U of Iowa. Dr. Clardy has received personal compensation in the range of \$500-\$4,999 for serving as a Speaker Honoraria for Grand Rounds with Barrow Neurological Institute.

Neuronal Uptake of Paraneoplastic and Other IgGs is Mediated by the Fc Portion of the IgG Molecule and Involves Previously Uncharacterized Neuronal FcγRI Receptors: Implications for Antibody-Mediated Neuronal Injury

Tammy Smith, Suzanne Liu, Noel Carlson, Stacey Clardy, John Greenlee

Objective

To investigate the mechanisms by which neurons take up paraneoplastic and other antibodies.

Background

Our laboratory has previously demonstrated that neurons can take up both normal and paraneoplastic IgGs and that paraneoplastic autoantibodies such as anti-Yo and anti-Hu can bind to their intracellular target antigens to produce neuronal death. In this study we investigated how neuronal antibody uptake occurs.

Design/Methods

We first compared neuronal uptake of normal and paraneoplastic Fab fragments with that of normal IgG Fc fragments or whole paraneoplastic IgGs. To determine whether neurons expressed receptors capable of binding the Fc portion of the IgG molecule, paraformaldehyde-fixed mouse and rat brains sections were probed with antibodies for the three major types of Fc receptors: FcγRI (CD64), FcγRII, (CD32) and FcγRIII (CD16). Neuronal uptake of antineuronal IgGs was compared between wild type mice and knockout mice lacking the FcγRI receptor. We also investigated whether neuronal IgG uptake could be blocked by normal IgG.

Results

Neurons incorporated the Fc fragment of normal IgG but not the Fab fragment. Intact paraneoplastic IgGs were taken up by neurons, but immunospecific Fab fragments were excluded. Neurons throughout cerebrum, cerebellum, and brainstem showed immunolabeling for FcγRI, but only rare neurons expressed FcγRII or FcγRIII. Uptake of paraneoplastic IgG and neuronal death were not observed in cultures from FcγRI knockout mice but were extensive in cultures from wild type controls. Paraneoplastic antibody uptake could be inhibited by normal IgG.

Neurology®

Missed Opportunities to Prevent N-methyl-D-Aspartate Receptor (NMDAR) Encephalitis in a DREAMer

Paul Crane, Matthew Jensen, Suzanne Liu, et al.

Neurology 2022;99;S66

DOI 10.1212/01.wnl.0000903528.36976.47

This information is current as of December 5, 2022

Updated Information & Services	including high resolution figures, can be found at: http://n.neurology.org/content/99/23_Supplement_2/S66.1.full
Subspecialty Collections	This article, along with others on similar topics, appears in the following collection(s): Cerebrospinal Fluid http://n.neurology.org/cgi/collection/cerebrospinal_fluid CT http://n.neurology.org/cgi/collection/ct Low pressure syndrome http://n.neurology.org/cgi/collection/low_pressure_syndrome
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 © 2022 American Academy of Neurology. All rights reserved. Print ISSN: 0028-3878. Online ISSN: 1526-632X.

