Paraneoplastic and Other Autoimmune Disorders of the Central Nervous System

The Neurohospitalist
2014, Vol 4(1) 5
© The Author(s) 2013
Reprints and permission:
sagepub.com/journalsPermissions.nav
DOI: 10.1177/1941874413509633
nhos.sagepub.com

Viroj Wiwanitkit, MD¹

The recent report on “Paraneoplastic and Other Autoimmune Disorders of the Central Nervous System” is very interesting.¹ Dr McKeon noted that “comprehensive serological and cerebrospinal fluid (CSF) evaluation for neural autoantibodies may permit a focused cancer evaluation.”¹ In fact, the serological and CSF evaluation for autoantibodies might be a useful tool for disease assessment.^{1,2} Nevertheless, there are several concerns regarding such testing. First, the method of antibody testing is very important. Sometimes, the titer might be low and can be detected only by some methods (such as indirect immunofluorescence tests).³ In addition, using insensitive methods might result in false-negative results.^{3,4} The possibility of a false-positive antibody result should always be kept in mind when interpreting the result. For example, in the case of P/Q-type voltage-gated calcium channel (VGCC) antibodies, false positives can be seen in up to 6% of patients with paraneoplastic syndromes and the true rate of false positives in the general population is unknown.⁵ Since the availability of the gold standard test, immunohistochemical staining on brain tissue sections combined with confirmation by immunoblotting

using recombinant purified proteins, is difficult, a development of a reliable and readily available assay is needed.⁶

References

1. McKeon A. Paraneoplastic and other autoimmune disorders of the central nervous system. *Neurohospitalist*. 2013;3(2):53-64.
2. Tanaka K. Pathogenesis of paraneoplastic neurological syndromes. *Brain Nerve*. 2010;62(4):309-318.
3. Jeffery OJ, Lennon VA, Pittock SJ, et al. GABAB receptor autoantibody frequency in service serologic evaluation [published online August 7, 2013]. *Neurology*. 2013.
4. Carpentier AF, Delattre JY. Immunological diagnosis of paraneoplastic neurologic syndromes. *Presse Med*. 1996;25(37):1835-1838.
5. Voltz R, Carpentier AF, Rosenfeld MR, Posner JB, Dalmau J. P/Q-type voltage-gated calcium channel antibodies in paraneoplastic disorders of the central nervous system. *Muscle Nerve*. 1999;22(1):119-122.
6. Maat P, Brouwer E, Hulsboom E, et al. Multiplex serology of paraneoplastic antineuronal antibodies. *J Immunol Methods*. 2013;391(1-2):125-132.

¹ Hainan Medical University, Hainan, China

Corresponding Author:

Viroj Wiwanitkit, Hainan Medical University, Hainan, China.
Email: vviroj@yahoo.com