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A Randomized Trial of Varenicline (Chantix) for the Treatment of Spinocerebellar Ataxia Type 3

Alessandro Filla, Francesco Sacca and Giuseppe De Michele

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Editors' Note: A common argument offered to medical students in favor of pursuing a career in neurology is that it is among the rare specialties in which the examination still must guide the imaging. There is no magic bullet of neuroradiologic tests; no one study every patient must have before the neurologist even sets eyes on them. This edict comes to mind as author Dr. de la Fuente-Fernandez and WriteClick contributor Dr. Bajaj debate the role of DaTSCAN, a radioisotope used in combination with SPECT imaging to view the striatal dopaminergic system, as an aid in the diagnosis of Parkinson disease (PD). Dr. Bajaj argues that PD clinical diagnostic accuracy and concordance between specialists is lower than reported and that DaTSCAN may be useful in challenging patients. Dr. de la Fuente-Fernandez counters that the radiation risk may be too great for a test that benefits the doctor more than the patient.

Megan Alcauskas, MD, and Robert C. Griggs, MD

A RANDOMIZED TRIAL OF VARENICLINE (CHANTIX) FOR THE TREATMENT OF SPINOCEREBELLAR ATAXIA TYPE 3

Alessandro Filla, Francesco Sacca, Giuseppe De Michele, Napoli, Italy: Zesiewicz et al.¹ reported that varenicline improved ataxia in patients with spinocerebellar ataxia type 3 (SCA3), yet the following issues should be considered.

1. Why did the authors use the Fisher test for comparison of baseline characteristics (table 1)? Patients in the placebo group appeared to be older and more severely compromised. For this reason, wouldn't the subjects respond less to treatment? Blocked randomization may have prevented unequal distribution between groups.
2. The number of patients was small. Furthermore, due to the large number of dropouts in the placebo group, the authors could not complete the originally planned crossover study. This weakens the study and its results. Power calculation, which also accounts for patient dropout, was not performed.
3. Primary efficacy measures included all the SARA subscores and there were no corrections made for

multiple comparisons. The SARA subscore for gait improved more in the varenicline group (table 2¹), but stance improved more in the placebo. Can the authors explain this discrepancy? In controlled trials, it is preferable to choose a priori a single, major study endpoint.

4. Beck Anxiety Inventory score improved in the varenicline group. Could mood improvement contribute to better performance for SARA?

This article contributes to the study of degenerative ataxias where effective treatments are lacking and new strategies are needed. However, the results of the study should be taken cautiously. This trial might be considered more a safety trial than a study on efficacy. Results of drug efficacy should be obtained in a larger study that complies with the guidelines of a well-designed, controlled, randomized trial.

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1. Zesiewicz TA, Greenstein MB, Sullivan KL, et al. A randomized trial of varenicline (Chantix) for the treatment of spinocerebellar ataxia type 3. *Neurology* 2012;78:545-550.

ROLE OF DATSCAN AND CLINICAL DIAGNOSIS IN PD

Nin P.S. Bajaj, Nottingham, UK: The authors discuss the role of DaTSCAN and paint a rosy picture of clinical diagnostic accuracy in PD.¹ Clinicopathologic studies² suggest good diagnostic accuracy in PD yet experience from drug trials suggests a PD diagnosis error rate of up to 15% and community studies an error rate of over 50%.³ A recent blinded video study showed high false-positive and false-negative error rates in PD diagnosis and poor concordance between movement disorder experts, which illustrates the fragility and subjectivity of clinical diagnosis in tremulous patients.³ The indication of DaTSCAN is not for diagnosis of PD or parkinsonian syndromes but per US Food and Drug Administration prescribing information is "for visualization of the dopamine transporter (DaT) distribution within the striatum . . . to assist in the evaluation of adult patients with suspected parkinsonian syndromes."⁴ Only a clinician can make a diagnosis. DaTSCAN may enable that diag-

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