WriteClick: Editor's Choice

Editors' Note: In WriteClick this week, in reference to "A randomized trial of varenicline (Chantix) for the treatment of spinocerebellar ataxia type 3," Drs. Connolly et al. report on their own clinical experience using varenicline in patients with ataxia. In contrast to authors Zesiewicz et al., they found poor tolerability in their mixed ataxia population. Dr. Andrade-Machado discusses his own findings of symmetric thalamic hypoperfusion without structural abnormalities in patients with atypical evolution of rolandic epilepsy, consistent with the results of Sánchez Fernández et al. in their article, "Early thalamic lesions in patients with sleep-potentiated epileptiform activity."

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

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

Barbara S. Connolly, L.K. Prashanth, Binit B. Shah, Connie Marras, Anthony E. Lang, Toronto: Zesiewicz et al.[1] reported that varenicline improved ataxia in patients with spinocerebellar ataxia type 3 (SCA3) with excellent tolerance. We used open-label varenicline in a similar dosing schedule from 2 weeks to greater than 6 months in 7 patients with ataxia (3 SCA3, 1 multiple system atrophy with cerebellar features, 3 ataxia of unknown etiology).

Five patients discontinued treatment due to intolerable side effects: nausea, insomnia, lightheadedness, depression, and worsened unsteadiness. One patient tolerated but discontinued treatment after 5 weeks for lack of benefit and one continued treatment for over 6 months with very mild subjective gait improvement but had frequent nightmares.

We did not utilize standard rating scales for most patients, and although Zesiewicz et al. found improvements in scores, they also reported no change in patient or clinical global impression. They did not provide phenotype details. Studies have shown that stimulation of nicotine receptors results in dopamine release.[2,3] Nigrostriatal degeneration with or without parkinsonism is a feature of SCA3; varenicline could increase dopamine levels, resulting in a modest improvement in motor function.

Varenicline was very poorly tolerated in our mixed ataxia population. The reason for this difference from the experience of Zesiewicz et al. is unclear. An impact on the dopaminergic system might explain some of the benefit documented by these investigators.

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.
2. Marshall DL, Redfern PH, Wonnacott S. Presynaptic nicotinic modulation of dopamine release in the three ascending pathways studied by in vivo microdialysis: comparison of naive and chronic nicotine-treated rats. J Neurochem 1997;68:1511–1519.
3. Maskos U. Role of endogenous acetylcholine in the control of the dopaminergic system via nicotinic receptors. J Neurochem 2010;114:641–646.

EARLY THALAMIC LESIONS IN PATIENTS WITH SLEEP-POTENTIATED EPILEPTIFORM ACTIVITY

René Andrade-Machado, Havana: Sánchez Fernández et al.[1] reported that electrical status epilepticus in sleep (ESES) was more likely in patients with early developmental lesions that involved the thalamus. They demonstrated that early thalamic injury is associated with ESES.

We investigated 24 children with rolandic epilepsy and followed them for 6 years.[2] The perfusion images were registered when an atypical evolution was diagnosed. Atypical features included continuous spikes and waves during non-REM sleep and cognitive deficits. Patients with atypical evolution of rolandic epilepsy showed a well-defined pattern of cerebral perfusion characterized by symmetric hypoperfusion at the level of thalamus without structural abnormalities in 6 out of 7 patients (72.4% vs 0% in typical variant). Only patients with bilateral and symmetric hypoperfusion in the thalamus were at risk for developing cognitive deficits and continuous spike and wave during non-REM sleep.

The authors' findings confirm ours as both suggest the potential role of the subcortical structures—specifically the thalamus—as a source of synchronizing, oscillatory activity during non-REM sleep and its role in cognitive deficits.

Author response: Iván Sánchez Fernández, Masanori Takeoka, Sanjay P. Prabhu, Sanjeev V. Kothare, Tobias Loddenkemper, Boston: We thank Dr. Andrade-Machado for his thoughtful comments. In our series,[1]

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