

Dextromethorphan and Quinidine Combination in Emotional Lability Associated With Depression: A Case Report

To the Editor: The combination of dextromethorphan and quinidine has been shown effective in the treatment of pseudobulbar affect in patients with amyotrophic lateral sclerosis¹ and multiple sclerosis² and has been tried in the treatment of diabetic neuropathy³ and heroin detoxification.⁴ Pseudobulbar affect is a disorder of emotional expression characterized by uncontrollable episodes of laughing and/or crying. The dextromethorphan-quinidine combination was developed to maximize brain levels of dextromethorphan, an *N*-methyl-D-aspartate (NMDA) antagonist, by using quinidine to slow cytochrome P450 2D6 enzymes. The mechanism by which dextromethorphan ameliorates pseudobulbar affect is unknown.

Case report. Ms A, a 32-year-old woman with a history of depression, started outpatient treatment in our clinic after an admission following an overdose in April 2010. She had been in psychiatric care since the age of 25 years, when she first attempted suicide. The patient met *DSM-IV* criteria for a major depressive episode and she was given a diagnosis of major depressive disorder, recurrent, and borderline personality disorder. She was taking bupropion, escitalopram, and clonazepam. She had failed treatment with paroxetine, citalopram, duloxetine, desvenlafaxine, and selegiline patch and had had 5 admissions between 2004 and 2010.

During the first year of treatment at our clinic, Ms A was admitted to the inpatient unit twice, for suicidal ideation, and, due to the refractory nature of her depression, referred for electroconvulsive therapy (ECT). During that year, she also failed treatment with therapeutic doses of mirtazapine, venlafaxine, and escitalopram and was tried on adjunct chlorpromazine and topiramate treatment; she received weekly psychotherapy during follow-up.

After these interventions and adjustments of medications, Ms A, as of March 2011, was taking clonazepam 1 mg twice daily, fluoxetine 20 mg/d, bupropion 400 mg/d, and levothyroxine 175 µg/d. By April 2011, she had completed 11 sessions of ECT and felt she was not making progress. She was still reporting significant problems in controlling her affective expressions, especially due to her crying outbursts. Ms A began treatment with dextromethorphan and quinidine 20 mg/10 mg daily, at which time she scored 14 on the Center for Neurologic Study Lability Scale⁵ (a score above 10 is indicative of lability⁵).

As of the time of this report, Ms A has been on treatment with dextromethorphan and quinidine for 1 year and reports significant improvement in her mood lability and crying spells. She has been out of the hospital and continues to go to work daily. She feels that her affective control has allowed her to benefit from her psychotherapy.

In the present case, we report the off-label use of the combination of dextromethorphan and quinidine to address emotional lability in a patient with depression. Though the dextromethorphan-quinidine combination is approved only for pseudobulbar affect, it is possible that the underlying altered mechanism for affective expression is also altered in mood disorders. Randomized controlled trials to assess the efficacy of this combination in mood disorders are suggested.

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Erick Messias, MD, PhD
emessias@gmail.com
Betty Everett, PhD

Author affiliations: Department of Psychiatry, University of Arkansas for Medical Sciences, Little Rock.

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