

Manic Episode Associated With Clarithromycin in a Patient With Medically Treated Depression

To the Editor: Antibiotic-induced mania, or antibiomania, is an uncommon cause of manic episodes.¹ Clarithromycin is one of the most frequently implicated antibiotics.¹ Here, a case of clarithromycin-associated mania in a patient with medically treated depression is presented.

Case report. Mr A, a 53-year-old schoolteacher with a history of depression, developed increasing distractibility while driving on the highway in 2011, elevating to the point at which he had to stop driving. The patient believed he was having a stroke and presented himself to the emergency department. On examination, the patient displayed agitation, pressured and tangential speech, flight of ideas, distractibility, grandiosity, and disorganized behavior. He became increasingly agitated and a “code white” was called; as a result, the patient was restrained and given haloperidol and lorazepam intramuscularly, which calmed him down. Medical workup was negative for another cause of mania. Mr A had been taking oral citalopram 20 mg daily for the last 15 years to treat his depression. He was also taking oral clarithromycin 1,000 mg daily, which had been prescribed for sinusitis 5 days prior to presentation. The patient noted elevated mood, increased pleasure in his job, and requiring less sleep 1 day after starting clarithromycin.

The patient was admitted, and clarithromycin and citalopram were discontinued. Three days later, Mr A's condition was stable, and he had few manic symptoms. He was started on olanzapine, 10 mg at bedtime, and lamotrigine, which was titrated to 50 mg twice daily. The patient was discharged 10 days after admission.

Nightingale et al² described the first cases of clarithromycin-induced mania in 1995 in 2 patients with AIDS who were prescribed clarithromycin to treat a *Mycobacterium avium* complex infection. About a year later, in 1996, Cone et al³ described the first case of clarithromycin-induced mania in a patient without AIDS who was prescribed clarithromycin for a soft-tissue infection. Four other cases of clarithromycin-induced mania have since been described in which clarithromycin was prescribed for sinusitis or *H pylori* infection.^{4–7} In all cases, mania resolved with discontinuation of clarithromycin.^{2–7} In only 1 case did the patient have a history of depression.⁵

The mechanism for antibiotic-induced mania is currently unknown, although several theories have been proposed, including raised serum concentration of the antibiotic (leading to higher central nervous system penetration), antibiotic interactions with neurotransmitters, and antibiotic interactions with cortisol and prostaglandins.¹

Management of antibiotic-induced mania typically involves discontinuation of the antibiotic and possible addition of mood-stabilizing medications.^{1,7} In this case, manic symptoms began to subside with discontinuation of clarithromycin. It is not clear whether clarithromycin is the direct cause of the manic episode, but it could be a contributing trigger. However, due to the past history of depression, the high degree of mania, and the occurrence during driving, mood-stabilizing medications were prescribed. Clarithromycin-induced mania is not a common occurrence, but consideration of this phenomenon could be useful in the differential diagnosis of an episode of mania.⁷

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Potential conflicts of interest: None reported.

Funding/support: None reported.

Published online: March 15, 2012.

Prim Care Companion CNS Disord 2012;14(2):doi:10.4088/PCC.11101285

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