

Limbird LE. New York, McGraw-Hill, 2001, pp 456–460

Antibiomania and Ciprofloxacin-Induced Mania

TO THE EDITOR: There have been increasing reports of mania associated with administration of antibiotics in patients without a previous history of bipolar disorder. The report by Bhalerao et al. (2006)¹ of mania induced by ciprofloxacin is interesting, although it does not appear to be the first report of this association. Although Bhalerao et al.¹ cite the article by Abouesh et al. on antibiomania,² they do not report that the cited article describes 23 cases of ciprofloxacin-induced mania, 12 from the 1997 WHO database, and 11 from the FDA database.

It appears that clarithromycin, fluoroquinolones (including ciprofloxacin and ofloxacin), and isoniazid, among antibiotic drugs, are most frequently associated with development of mania.^{2,3} These three antibiotics are attributed to 90% of all published cases of mania secondary to antibiotics—66% of the cases in the WHO database and 85% of cases in the FDA database, respectively.² It is thought that the mechanism of antibiotic-induced mania is related to GABA-antagonism, and there is some evidence that ciprofloxacin is a GABA-antagonist.

Interestingly, four WHO-database patients (33%) and five of the FDA-database patients (45%) were also prescribed agents that are either known or suspected of causing manic symptoms.

Similarly, three patients in the WHO database (25%) and two in the FDA database (18%) were concurrently taking mood-stabilizing agents (lithium, carbamazepine, and/or valproate).

Applying the Naranjo adverse drug reactions (ADR) probability scale criteria⁴ to the case described by Bhalerao et al.,¹ the manic episode appears, at most, only a “possible” (less likely than a “probable” or “definite”) reaction to ciprofloxacin.

The patient described by Bhalerao et al.¹ presented at admission with symptoms of anorexia and fatigue, and was possibly depressed. Ulcerative colitis,⁵ primary biliary cholangitis (and, specifically, fatigue in that condition), and treatment with sulfasalazine⁶ have all been associated with depression. It is not entirely clear whether sulfasalazine prescribed (potentially long-term) this patient was stopped along with other drugs on discharge. As Helzer et al.⁵ lament, despite the fact that more than one-quarter of ulcerative colitis patients have some diagnosable psychiatric illness, the occurrence of psychiatric disorder is rarely documented in their medical charts.

Whether there were depressive symptoms before admission or not, this could well be a first episode of mania in a young man responding to antipsychotic treatment. It would be helpful to know whether he had a family history of bipolar disorder or any other psychiatric disorder.

Interestingly, metronidazole co-prescription, also relevant in this case,¹ was also prescribed in several cases

(N = 10) of antibiotic-induced mania.² Although metronidazole was stopped before discharge, its contribution to the development of mania needs to be considered. The onset of agitation/violence occurred after discharge, but the onset of a milder, hypomanic episode might have been missed, possibly even contributing to the apparent “quick clinical improvement” on a medical ward. If that is true, any of the other drugs could easily have also been responsible for the manic symptoms.

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