A Case of Blunted Orally Disintegrating Olanzapine Effect Due to Coadministered Psyllium

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Psychosis is a potentially debilitating psychiatric condition treated with antipsychotic medication. Constipation due to muscarinic receptor blockade is common to many antipsychotics, particularly when combined with other constipating medications. Here, we report the case of a patient with constipation from orally disintegrating tablets (ODT) of olanzapine and buprenorphine whose bowel regimen of psyllium interfered with olanzapine absorption, thereby blunting the antipsychotic response. Discontinuation of psyllium resulted in rapid and robust symptom improvement.

Case Report

Mr A, a 37-year-old man with a history of *DSM-5*–defined schizoaffective disorder and opioid use disorder, was admitted in February 2020 for worsening paranoia and opioid cravings. Buprenorphine was started and titrated to 12 mg daily to good effect. Psyllium 3 g twice daily was added when the patient reported constipation. Several antipsychotics were trialed but ultimately discontinued due to inadequate symptom reduction. Olanzapine was eventually trialed, and the ODT formulation was chosen due to the patient's known history of "cheeking."

To the team's surprise, Mr A's psychosis worsened as soon as the switch to olanzapine was made. He developed bizarre and complex delusions that were not previously present. Paranoia likewise intensified to an unprecedented level. The dose was rapidly escalated to 10 mg twice daily with no symptom improvement. Notably, the degree of post-administration sedation was less than expected. Ten days into the olanzapine trial, it came to our attention that all ODT olanzapine doses were administered simultaneously with psyllium. A review of the literature did not reveal a specific interaction; however, psyllium was discontinued due to its known ability to alter the absorption of some medications.

The antipsychotic effect after discontinuation of psyllium was robust and rapid. The bizarre delusions vanished, and the paranoia improved markedly. Although serum olanzapine levels were not obtained, there was a clear clinical antipsychotic response. The day before psyllium was stopped, the patient's Brief Psychiatric Rating Scale (BPRS) score, an objective measurement of psychosis severity,[1] was 56. Two days after discontinuing psyllium, his BPRS score had dropped to 30, and he stated, "The medication feels like it's finally working." His BPRS score was 26 five days after discontinuation of psyllium, and he stated, "I feel much better but very sleepy now." Dosing was changed from 10 mg twice daily to 5 mg in the morning and 15 mg in the evening to address daytime sedation, to good effect.

Discussion

To our knowledge, this is the first report of a potential interaction between psyllium and ODT olanzapine. In addition to this specific interaction, this case highlights several clinical pearls relevant to the psychiatric prescriber. First, there are several antipsychotics with ODT formulations: olanzapine (Zyprexa Zydis), risperidone (Risperdal M-Tab), aripiprazole (Abilify), and clozapine (FazaClo). Small portions of these ODT medications may be absorbed sublingually or buccally, but the majority is absorbed through the gastrointestinal tract, just like oral tablets, and they are essentially bioequivalent.[2–5] Oral tablets and ODT formulations are therefore potentially subject to similar alterations in absorption kinetics.[6]

Fiber supplements are known to alter absorption of many psychotropics including lithium, tricyclic antidepressants, and carbamazepine.[7] While the exact mechanism remains unknown, many proposals exist including alterations of stool water content, decreased brush border contact, alteration in motility, and medication sequestration into the fiber matrix itself.[7] At least 1 manufacturer recommends separating medications from psyllium consumption by at least 2 hours.[8] While this case relates specifically to olanzapine, similar alterations could be seen with other ODT medications as well. Given the ubiquity of psyllium, both prescribed and over the counter, as a bowel regimen, it is important to consider how its use might impact medication absorption.

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