

# Case report: Cytochrome P450 implications for comorbid ADHD and OCD pharmacotherapy.

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Abstract

## TOPIC:

This case report details the treatment of an early adolescent already receiving treatment for attention-deficit hyperactivity disorder who presents with recurrent obsessive-compulsive disorder. Potential atomoxetine (Strattera) and fluoxetine (Prozac) interactions via Cytochrome P450 (CYP450) pathways are examined and alternate therapies are recommended.

## PURPOSE:

Provide a discussion of psychopharmacogenomics, especially in the case of combining medications, CYP450 enzymes, and clinical implications in the context of the burgeoning field of precision medicine. The following questions are addressed: 1) What are the recommendations for pharmacogenetics testing? 2) How should pharmacogenetics inform medication selection? 3) What impact should CYP450 knowledge have on medication dosing?

## SOURCES:

Peer-reviewed journals, U.S. Health and Human Services, National Institutes of Health, National Medical Library, and the Clinical Pharmacology database.

## CONCLUSIONS:

Genetic testing as a prescriptive tool is not indicated for all medications; however, potential drug-drug interactions, narrow therapeutic drug index, and side effect toxicity contribute to the need for testing. An understanding of CYP450 metabolism and drug interaction as well as metabolism phenotypes should inform prescribing and dosing psychotropic medications.