

**Publication****Severe Adverse Drug Reactions to Quetiapine in Two Patients Carrying; CYP2D6; \*4 Variants: A Case Report****JournalArticle (Originalarbeit in einer wissenschaftlichen Zeitschrift)****ID** 4622205**Author(s)** Stäuble, Céline K.; Lampert, Markus L.; Mikoteit, Thorsten; Hatzinger, Martin; Hersberger, Kurt E.; Meyer Zu Schwabedissen, Henriette E.**Author(s) at UniBasel** [Meyer zu Schwabedissen, Henriette](#) ; [Stäuble, Céline](#) ; [Lampert, Markus Leopold](#) ; [Hersberger, Kurt](#) ;**Year** 2021**Title** Severe Adverse Drug Reactions to Quetiapine in Two Patients Carrying; CYP2D6; \*4 Variants: A Case Report**Journal** International Journal of Molecular Sciences**Volume** 22**Number** 12**Pages / Article-Number** 6480**Keywords** CYP2D6; CYP3A4; adverse drug reaction; antipsychotics; depression; neuroleptics; pharmaceutical care; pharmacogenetics; psychiatry; quetiapine.**Mesh terms** Alleles; Antipsychotic Agents, metabolism; Cytochrome P-450 CYP2D6, metabolism; Drug-Related Side Effects and Adverse Reactions, metabolism; Genetic Association Studies; Genetic Variation; Genotype; Humans; Male; Middle Aged; Pharmacogenetics; Pharmacogenomic Variants; Phenotype; Quetiapine Fumarate, metabolism; Severity of Illness Index

We report two cases of patients who developed severe adverse drug reactions including persistent movement disorders, nausea, and vertigo during treatment with quetiapine at maximum daily doses ranging between 300 and 400 mg. The extensive hepatic metabolism of quetiapine is mainly attributed to cytochrome P450 3A4 (CYP3A4). However, there is recent evidence supporting the idea of CYP2D6 playing a role in the clearance of the quetiapine active metabolite norquetiapine. Interestingly, both patients we are reporting of are carriers of the CYP2D6 \*4 variant, predicting an intermediate metabolizer phenotype. Additionally, co-medication with a known CYP2D6 inhibitor and renal impairment might have further affected quetiapine pharmacokinetics. The herein reported cases could spark a discussion on the potential impact of a patient's pharmacogenetic predisposition in the treatment with quetiapine. However, further studies are warranted to promote the adoption of pharmacogenetic testing for the prevention of drug-induced toxicities associated with quetiapine.

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