Exploiting metabolic differences to optimize SSRI dosing in adolescents

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Jeffrey Strawn, MD, University of Cincinnati College of Medicine (OH), Ethan Poweleit, Children's Hospital Medical Center, Cincinnati, and Laura Ramsey, Ph.D., Children's Hospital Medical Center and UC College of Medicine, used pharmacokinetic modeling to compare SSRI exposure and compare the effects of different doses and dosing strategies, such as twice-a-day dosing in individuals who carry forms of the CYP2C19 gene that cause SSRIs to be broken down and cleared from the blood at different rates. In fact, the simulation study showed that in some cases a poor metabolizer might need to be given twice as much drug as a normal metabolizer. The extent of the differences seen within the model were not the same for the two SSRIs compared, escitalopram and sertraline. The researchers describe the study design and present their results in the article entitled "CYP2C19-Guided Escitalopram a … tic Modeling Study."

"Anxiety and depression are the most common mental health disorders of adolescence. This study provides important insights for psychiatrists treating adolescents who are non-responsive to SSRI treatment," says Harold S. Koplewicz, MD, Editor-in-Chief of the Journal of Child and Adolescent Psychopharmacology and President of the Child Mind Institute in New York.


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