

# Pharmacogenetic analyses can optimize clomipramine dosing

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(HealthDay)—Pharmacogenetic analysis can help optimize

clomipramine doses in patients who do not respond to standard-dose treatment, according to a report published online Oct. 31 in the *Journal of Clinical Pharmacy and Therapeutics*.

Stefania Antoniazzi, Pharm.D., from the Università di Milano in Milan, and colleagues report on the case of a 47-year-old woman who presented with the characteristics of a depressive episode, characterized by lowering of mood, sleep disturbances, asthenia, and anhedonia. Since age 30 she had experienced recurrent major depressive episodes.

The authors note that treatment with 62.5 mg/day intravenous clomipramine led to an initial improvement, but the patient's mood remained low, with low self-esteem and pessimism. The dosage was increased to the maximum intravenous permitted dose of 75 mg/day, but there was no improvement. After a few days, the therapeutic regimen was changed to the maximum permitted starting intramuscular and [oral doses](#). An improvement in symptoms was seen after 10 days, but not complete remission. In pharmacogenetics analyses, the patient was found to be heterozygous for CYP2C19\*17 and CYP2D6 promoter variant (rs1080985), which was compatible with increased metabolism. The patient also carried a rare functional allele (*CYP3A5\*1*) and an inducible genotype for CYP1A2, indicating that she could be an extensive CYP3A 4/5 and CYP1A2 metabolizer.

"Therapeutic drug monitoring and pharmacogenetic analyses may be useful in the investigation and optimization of clomipramine in standard-dose nonresponders," the authors write.

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