# 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.

**More information:** Full Text (subscription or payment may be required)