

Editorial Highlights on Anti-Anhedonic Effect

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Editorial

Anti-anhedonic effects were specifically related to increased glucose metabolism in the dorsal anterior cingulate cortex and putamen. Our study emphasizes the importance of the glutamatergic system in treatment-refractory bipolar depression, particularly in the treatment of symptoms such as anhedonia.

Anhedonia—which is defined as diminished pleasure from, or interest in, previously rewarding activities—is one of two cardinal symptoms of a major depressive episode. However, evidence suggests that standard treatments for depression do little to alleviate the symptoms of anhedonia and may cause reward blunting. Indeed, no therapeutics are currently approved for the treatment of anhedonia. Notably, over half of patients diagnosed with bipolar disorder experience significant levels of anhedonia during a depressive episode. Recent research into novel and rapid-acting therapeutics for depression, particularly the noncompetitive N-Methyl-D-aspartate receptor

antagonist ketamine, has highlighted the role of the glutamatergic system in the treatment of depression; however, it is unknown whether ketamine specifically improves anhedonic symptoms. The present study used a randomized, placebo-controlled, double-blind crossover design to examine whether a single ketamine infusion could reduce anhedonia levels in 36 patients with treatment-resistant bipolar depression. The study also used positron emission tomography imaging in a subset of patients to explore the neurobiological mechanisms underpinning ketamine's anti-anhedonic effects. We found that ketamine rapidly reduced the levels of anhedonia. Furthermore, this reduction occurred independently from reductions in general depressive symptoms. Anti-anhedonic effects were specifically related to increased glucose metabolism in the dorsal anterior cingulate cortex and putamen. Our study emphasizes the importance of the glutamatergic system in treatment-refractory bipolar depression, particularly in the treatment of symptoms such as anhedonia.

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