Repeated ketamine infusions have cumulative and sustained antidepressant effects. Reductions in depressive symptoms were maintained among responders through once-weekly infusions” Phillips et al (2019).

Abstract:

OBJECTIVE: Subanesthetic ketamine doses have been shown to have rapid yet transient antidepressant effects in patients with treatment-resistant depression, which may be prolonged by repeated administration. The purpose of this study was to evaluate the antidepressant effects of a single ketamine infusion, a series of repeated ketamine infusions, and prolongation of response with maintenance infusions.

METHODS: Forty-one participants with treatment-resistant depression completed a single-site randomized double-blind crossover comparison of single infusions of ketamine and midazolam (an active placebo control). After relapse of depressive symptoms, participants received a course of six open-label ketamine infusions administered thrice weekly over 2 weeks. Responders, classified as those participants who had a ≥50% decrease in their scores on the Montgomery-Åsberg Depression Rating Scale (MADRS), received four additional infusions administered once weekly (maintenance phase).

RESULTS: Compared with midazolam, a single ketamine infusion elicited a significantly greater reduction in depressive symptoms at the primary efficacy endpoint (24 hours
postinfusion). Linear mixed models revealed cumulative antidepressant effects with repeated infusions and doubling of the antidepressant response rate. Fifty-nine percent of participants met response criteria after repeated infusions, with a median of three infusions required before achieving response. Participants had no further change in MADRS scores during weekly maintenance infusions.

CONCLUSIONS: Repeated ketamine infusions have cumulative and sustained antidepressant effects. Reductions in depressive symptoms were maintained among responders through once-weekly infusions. These findings provide novel data on efficacious administration strategies for ketamine in patients with treatment-resistant depression. Future studies should further expand on optimizing administration to better translate the use of ketamine into clinical settings.

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