(417) Oral ketamine for chronic pain: a 32-subject placebo-controlled trial in patients on chronic opioids

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Abstract
Ketamine, an intravenous anesthetic agent, has been shown to have analgesic and opioid-sparing effects without causing respiratory depression. Small observational studies of daily oral administration of low-dose ketamine have demonstrated analgesia and opioid-sparing, but no randomized controlled trials have been published. We conducted a randomized placebo-controlled trial of oral ketamine for common chronic pain conditions in opioid-tolerant individuals. 32 subjects received either oral ketamine (KETAMINE) up to 64 mg/day or an inactive placebo (PLACEBO) for two weeks. Results were assessed with a daily log of pain and interference with activity, and after one and two weeks using the Brief Pain Inventory (BPI), PHQ-9, and Clinical Global Impression - Improvement of Condition (CGI); daily opioid dose was tracked. CGI was "much improved" or "improved" in 10/16 subjects in KETAMINE and 6/16 in PLACEBO. Trends toward greater improvement in KETAMINE vs. PLACEBO were found in the daily log of interference with activity, minimum pain and average pain; in the BPI pain relief from medications (increased 13% vs. 7%, p=0.44); and PHQ-9 (decreased 4.5 vs. 3.3, p=0.49). Side effects were rare and minor. Opioid dose was unchanged. After 2-7 months of open-label dose titration, 15 of 19 subjects surveyed continued ketamine (7 in KETAMINE, 8 in PLACEBO). CGI was "much improved" or "improved" in 10/16 subjects in KETAMINE and 6/16 in PLACEBO. Trends toward greater improvement in KETAMINE vs. PLACEBO were found in the daily log of interference with activity, minimum pain and average pain; in the BPI pain relief from medications (increased 13% vs. 7%, p=0.44); and PHQ-9 (decreased 4.5 vs. 3.3, p=0.49). Side effects were rare and minor. Opioid dose was unchanged. After 2-7 months of open-label dose titration, 15 of 19 subjects surveyed continued ketamine (7 in KETAMINE, 8 in PLACEBO). Average dose was 101 mg/day (range 16-256). CGI was "much improved" or "improved" in 11/15, opioid dose decreased in 9/15, PHQ-9 improved in 11/15. Oral ketamine may be a useful and safe opioid-sparing treatment for patients with chronic pain. A larger placebo-controlled trial is planned. Supported by a grant from the University of Washington Department of Family Medicine.