

| Table 1. Patient Characteristics by Ketamine Treatment Group and Overall ^a | | | | |
|---|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------|
| Characteristic | IV (n=47) | IN (n=15) | Total (N=62) | P |
| Demographic | | | | |
| Age, median (Q1, Q3) [min, max], y | 50.6 (39.9, 54.3) [19.9, 63.8] | 46.8 (37.3, 61.8) [26.5, 68.4] | 50.2 (39.9, 55.5) [19.9, 68.4] | .39* |
| Sex, n (%) | | | | .13 [†] |
| Male | 14 (29.8) | 8 (53.3) | 22 (35.5) | |
| Female | 33 (70.2) | 7 (46.7) | 40 (64.5) | |
| Body mass index, median (Q1, Q3) [min, max] | 27.9 (24.0, 32.4) [20.8, 39.6] | 32.0 (27.7, 36.3) [23.8, 50.9] | 28.5 (24.8, 33.4) [20.8, 50.9] | .049* |
| Employment, n (%) | | | | 1.00 [†] |
| Unemployed | 3 (6.4) | 0 (0.0) | 3 (4.8) | |
| Employed | 25 (53.2) | 8 (53.3) | 33 (53.2) | |
| Disability due to depression | 11 (23.4) | 4 (26.7) | 15 (24.2) | |
| Homemaker, retired, or student | 8 (17.0) | 3 (20.0) | 11 (17.7) | |
| Clinical | | | | |
| Diagnosis, n (%) | | | | 1.00 [†] |
| MDD | 44 (93.6) | 15 (100.0) | 59 (95.2) | |
| BD-I | 1 (2.1) | 0 (0.0) | 1 (1.6) | |
| BD-II | 2 (4.3) | 0 (0.0) | 2 (3.2) | |
| Depression episode duration, median (Q1, Q3) [min, max], y | 2.3 (1.0, 5.0) [0.3, 20.0] | 8.0 (2.0, 11.0) [0.5, 37.0] | 3.0 (1.5, 8.0) [0.3, 37.0] | .01* |
| PTSD, n (%) | 6 (12.8) | 0 (0.0) | 6 (9.7) | .32 [†] |
| Anxiety disorders, n (%) | 29 (61.7) | 10 (66.7) | 39 (62.9) | 1.00 [†] |
| Fibromyalgia or chronic pain, n (%) | 4 (8.5) | 3 (20.0) | 7 (11.3) | .34 [†] |
| OCD, n (%) | 2 (4.3) | 0 (0.0) | 2 (3.2) | 1.00 [†] |
| Eating disorder, n (%) | 2 (4.3) | 1 (6.7) | 3 (4.8) | 1.00 [†] |
| Borderline personality disorder, n (%) | 3 (6.4) | 2 (13.3) | 5 (8.1) | .59 [†] |
| History of substance use disorder, n (%) | 4 (8.5) | 4 (26.7) | 8 (12.9) | .09 [†] |
| Study Variables | | | | |
| Esketamine nasal dosage deficit relative to IV ketamine dosage, median (Q1, Q3) [min, max], mg ^b | NA | 8.4 (5.5, 24.2) [0.6, 24.8] | NA | NA |
| Baseline QIDS-SR score, median (Q1, Q3) [min, max] | 17 (15, 20) [9, 24] | 19 (18, 20) [16, 23] | 18 (15, 20) [9, 24] | .07* |
| No. of treatments, n (%) | | | | <.001[†] |
| 1 to 3 | 25 (53.2) | 1 (6.7) | 26 (41.9) | |
| 4 to 6 | 22 (46.8) | 0 (0.0) | 22 (35.5) | |
| 7 or 8 | 0 (0.0) | 14 (93.3) | 14 (22.6) | |
| No. of treatments per week, median (Q1, Q3) [min, max] ^c | 1.5 (1.0, 2.0) [0.7, 3.0] | 2.0 (1.6, 2.0) [0.7, 2.0] | 1.5 (1.2, 2.0) [0.7, 3.0] | .11 |
| QIDS-SR score change from baseline to last treatment, median (Q1, Q3) [min, max] | −8 (−13, −4) [−21, 3] | −10 (−13, −4) [−16, −2] | −8 (−13, −4) [−21, 3] | .84 [†] |
| QIDS-SR score percent change from baseline to last treatment, median (Q1, Q3) [min, max] | −53 (−77, −25) [−100, 20] | −55 (−69, −24) [−80, −10] | −54 (−75, −24) [−100, 20] | .65 [†] |
| Response, n (%) | 27 (57.4) | 9 (60.0) | 36 (58.1) | 1.00 [†] |
| Remission, n (%) | 20 (42.6) | 4 (26.7) | 24 (38.7) | .37 [†] |
| Oxygen saturation ^d | | | | |
| Change at 40 min ^e | 0.44 (0.42) | −0.34 (0.52) | 0.13 (0.33) | .25‡ |
| Change to endpoint ^f | 0.25 (0.44) | −0.30 (0.54) | 0.03 (0.34) | .43‡ |
| Systolic BP ^d | | | | |
| Change at 40 min ^e | 8.66 (1.25) | 0.97 (1.35) | 5.41 (1.09) | <.001‡ |
| Change to endpoint ^f | 5.88 (1.38) | 1.02 (1.67) | 3.94 (1.12) | .03‡ |
| Diastolic BP ^d | | | | |
| Change at 40 min ^e | 3.38 (0.96) | 2.27 (0.94) | 2.82 (0.67) | .42‡ |
| Change to endpoint ^f | 1.30 (1.00) | 2.53 (1.03) | 1.90 (0.71) | .40‡ |
| Heart rate ^d | | | | |
| Change at 40 min ^e | 1.66 (0.88) | −3.12 (1.05) | −0.24 (0.76) | .001‡ |
| Change to endpoint ^f | 0.42 (0.98) | −2.80 (1.22) | −0.84 (0.80) | .04‡ |
| CADSS score ^d | 4.14 (1.24) | 8.09 (1.66) | 5.53 (1.02) | .06‡ |
| Current Medications | | | | |
| No. of psychotropics, median (Q1, Q3) [min, max] | 3.0 (3.0, 5.0) [1, 6] | 3.0 (3.0, 5.0) [2, 7] | 3.0 (3.0, 5.0) [1, 7] | .83* |
| Individual psychotropic/class, n (%) | | | | |
| SSRI | 12 (25.5) | 4 (26.7) | 16 (25.8) | 1.00 [†] |
| SNRI | 16 (34.0) | 5 (33.3) | 21 (33.9) | 1.00 [†] |
| TCA | 6 (12.8) | 2 (13.3) | 8 (12.9) | 1.00 [†] |
| MAOI | 0 (0.0) | 2 (13.3) | 2 (3.2) | .056 [†] |
| Atypical antipsychotics | 17 (36.2) | 3 (20.0) | 20 (32.3) | .35 [†] |
| Mirtazapine | 4 (8.5) | 1 (6.7) | 5 (8.1) | 1.00 [†] |
| Bupropion | 14 (29.8) | 2 (13.3) | 16 (25.8) | .31 [†] |
| Stimulants | 13 (27.7) | 1 (6.7) | 14 (22.6) | .16 [†] |
| Trazodone | 16 (34.0) | 3 (20.0) | 19 (30.6) | .36 [†] |
| Gabapentin | 6 (12.8) | 1 (6.7) | 7 (11.3) | 1.00 [†] |
| Z-drugs | 6 (12.8) | 5 (33.3) | 11 (17.7) | .12 [†] |
| Benzodiazepines | 20 (42.6) | 8 (53.3) | 28 (45.2) | .56 [†] |
| Neuromodulation (tried in current episode), n (%) | | | | |
| ECT | 17 (36.2) | 2 (13.3) | 19 (30.6) | .12 [†] |
| TMS | 8 (17.0) | 2 (13.3) | 10 (16.1) | 1.00 [†] |

^aBoldface indicates statistical significance.

^bDeficit calculated from dosage esketamine nasal patient would have received during IV ketamine treatment minus 45% of their maximum esketamine dose.

^cPatient-averaged number of treatments per week.

^dn=32 to 34 for IV patients because data were missing for 13 to 15 patients. n=14 for IN patients for CADSS because data were missing for 1 patient. Values are shown as mean (SE).

^eThe value closest to 40 minutes after the start of treatment was used.

^fThe value at the end of the session within 100 minutes was used.

*Wilcoxon rank sum P value; †Fisher exact P value; ‡repeated-measures ANOVA.

Abbreviations: ANOVA=analysis of variance, BD=bipolar disorder, BMI=body mass index, BP=blood pressure, CADSS=Clinician-Administered Dissociative States Scale, ECT=electroconvulsive therapy, IN=intranasal, IV=intravenous, MAOI=monoamine oxidase inhibitor, MDD=major depressive disorder, NA=not applicable, OCD=obsessive-compulsive disorder, PTSD=posttraumatic stress disorder, QIDS-SR=16-item Quick Inventory of Depressive Symptomatology self-report, SNRI=serotonin-norepinephrine reuptake inhibitor, SSRI=selective serotonin reuptake inhibitor, TCA=tricyclic antidepressant, TMS=transcranial magnetic stimulation.