130 received acute ECT

14 dropped out

116 had at least 3 ECT treatments

5 dropped out

111 had suicide item score ≥1 at baseline

8 dropped out

2 achieved resolution of suicidality

103 completed acute ECT

90 achieved resolution of suicidality

Figure S1. Flow chart of study participants receiving electroconvulsive therapy for acute treatment

Table S1 Baseline characteristics (n = 111)

|  |  |
| --- | --- |
| Variables | Distribution |
| Sex-female, n (%) | 80 (72.1) |
| Past suicide attempt, n (%) | 66 (59.5) |
| Treatment-resistant depression, n (%) | 95 (85.6) |
| Substance abuse/dependence, n (%) | 17 (15.3) |
| Psychosis, n (%) | 10 (9.0) |
| Thrice weekly treatment, n (%) | 23 (19.8) |
| Age, mean (SD), years | 46.5 (10.6) |
| Age at onset, mean (SD), year | 37.6 (11.6) |
| Duration of the current depressive episode, mean (SD), months | 16.4 (21.0) |
| Number of previous MDEs a, mean (SD) | 2.6 (1.9) |
| Baseline ZDS b item14  (higher score means higher hopelessness) | 3.8 (0.5) |
| SF-36 c Body Pain Index (BPI) score, mean (SD)  (higher score means less pain) | 49.0 (30.0) |
| Baseline WSAS d sore, mean (SD | 30.2 (8.4) |
| HAMD-17 item 3 (suicide item), mean (SD)  baseline, mean (SD)  endpoint, mean (SD)  p e  effect size | 2.8 (0.8)  0.3 (0.8)  **<0.001**  2.40 |
| Baseline HAMD-16 f, mean (SD)  baseline, mean (SD)  endpoint, mean (SD)  p e  effect size | 28.2 (6.8)  7.5 (5.9)  **<0.001**  2.38 |

a MDE = major depressive episode

b ZDS = Zung Self-Rating Depression Scale

c SF-36 = Medical Outcomes Study Short-Form 36

d WSAS = Work and Social Adjustment Scale

e Paired t-test = mean scores at endpoint compared to mean scores at baseline

f HAMD-16 = 16-item Hamilton Rating Scale for Depression = HAMD-17 minus suicide item

Table S2.Potential predictors affecting number of ECT treatments to resolution of suicidality (suicide item = 0) using univariate Cox regression analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Predictor | B | Odds ratio a | 95.0% CI b | p |
| Sex (male vs. female) | 0.26 | 1.29 | 0.83−2.00 | 0.255 |
| Past suicide attempt (yes vs. no) | 0.61 | 0.54 | 0.36−0.83 | **0.004** |
| Treatment-resistant depression (yes vs. no) | 0.44 | 0.64 | 0.36−1.14 | 0.127 |
| Substance abuse/dependence (yes vs. no) | -0.35 | 0.70 | 0.39−1.27 | 0.240 |
| Psychosis (yes vs. no) | 0.08 | 1.08 | 0.54−2.17 | 0.820 |
| Thrice-weekly vs. twice-weekly treatment | -0.08 | 0.93 | 0.57−1.52 | 0.761 |
| Age | 0.00 | 1.00 | 0.98−1.02 | 0.989 |
| Age at onset | 0.004 | 1.004 | 0.99−1.02 | 0.609 |
| Duration of the current episode | -0.01 | 0.99 | 0.98−0.99 | **0.030** |
| Number of previous MDEs | -0.02 | 0.98 | 0.92−1.04 | 0.537 |
| Baseline ZDS item14 score | -0.34 | 0.71 | 0.52−0.98 | 0.710 |
| SF-36 Body Pain Index (BPI) score | 0.01 | 1.01 | 1.00−1.01 | **0.037** |
| Baseline WSAS sore | -0.03 | 0.97 | 0.95−0.99 | **0.011** |
| Baseline HAMD-16 score | 0.02 | 1.02 | 0.99−1.05 | 0.209 |
| Baseline HAMD-17 item 3 (suicide item) | -0.32 | 0.73 | 0.55−0.96 | **0.024** |

aOdds ratio (= Exp (B)) = ratio of odds of resolution of suicidality vs. non- resolution of suicidality

bCI = Confidence Interval

**Bold =** statistically significant

Table S3.Factors affecting number of ECT treatments to resolution of suicidality using forward multivariate Cox regression analysis

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Predictor | B | Odds ratio | 95.0% CI | p |
| Past suicide attempt (yes vs. no) | -0.56 | 0.57 | 0.37−0.87 | **0.010** |
| Baseline WSAS sore | -0.03 | 0.97 | 0.95−0.99 | **0.028** |