

Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

eTable 1: Adequacy of Antipsychotic and Antidepressant Trial by Treatment Group Before Randomization

Level 3 and Level 4 ATHF Codes	Active			Sham			All			
(Indicates moderate to strong confidence that an adequate trial has taken place)	(n=81)			(n=83)			(n=164)			
	n	(%)	Events	n	(%)	Events	n	(%)	Events	P Value
Antidepressants	10	12.3	13	10	12.0	11	20	12.2	24	0.95
Other antidepressants	7	8.6	9	7	8.4	8	14	8.5	17	0.96
Selective serotonin reuptake inhibitors	4	4.9	4	2	2.4	2	6	3.7	6	0.39
Non-selective monoamine reuptake inhibitors	0	0.0	0	1	1.2	1	1	0.6	1	0.32
Antipsychotics	3	3.7	3	3	3.6	3	6	3.7	6	0.98
Diazepines, Oxazepines, Thiazepines, and Oxepines	2	2.5	2	1	1.2	1	3	1.8	3	0.55
Other Antipsychotics	1	1.2	1	2	2.4	2	3	1.8	3	0.57

Note. ATHF: Antidepressant Treatment History Form

eTable 2: Adequacy of Antipsychotic and Antidepressant Trial by Treatment Group at End of Active Treatment

Level 3 and Level 4 ATHF Codes	Active			Sham			All			
(Indicates moderate to strong confidence that an adequate trial has taken place)	(n=81)			(n=83)			(n=164)			
	n	(%)	Events	n	(%)	Events	n	(%)	Events	P Value
Antidepressants	22	27.2	44	29	34.9	52	51	31.1	96	0.28
Other antidepressants	19	23.5	38	17	20.5	27	36	22.0	65	0.65
Selective serotonin reuptake inhibitors	6	7.4	6	17	20.5	22	23	14.0	28	0.02
Non-selective monoamine reuptake inhibitors	0	0.0	0	3	3.6	3	3	1.8	3	0.08
Antipsychotics	6	7.4	6	12	14.5	27	18	11.0	33	0.15
Diazepines, oxazepines, thiazepines, and oxepines	4	4.9	4	5	6.0	8	9	5.5	12	0.76
Other antipsychotics	2	2.5	2	2	2.4	9	4	2.4	11	0.98
Indole derivatives	0	0.0	0	3	3.6	6	3	1.8	6	0.08
Lithium	0	0.0	0	3	3.6	4	3	1.8	4	0.08

Note. ATHF: Antidepressant Treatment History Form

eTable 3: Urine Drug Screen Results

Drug	Result	-----Baseline-----				-----End of rTMS Treatment-----				-----End of 24-week Follow-up-----			
		Active (n=81) n (%)	Sham (n=83) n (%)	Total (n=164) n (%)	P Value	Active (n=81) n (%)	Sham (n=83) n (%)	Total (n=164) n (%)	P Value	Active (n=81) n (%)	Sham (n=83) n (%)	Total (n=164) n (%)	P Value
MET +	Neg	78 (100.0)	74 (100.0)	152 (100.0)	N/A	56 (100.0)	61 (100.0)	117 (100.0)	N/A	39 (100.0)	47 (100.0)	86 (100.0)	N/A
ECS	Pos	0 (0.0)	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	0 (0.0)	
	Tot	78 (51.3)	74 (48.7)	152 (100.0)		56 (47.9)	61 (52.1)	117 (100.0)		39 (45.3)	47 (54.7)	86 (100.0)	
AMP +	Neg	81 (100.0)	81 (97.6)	162 (98.8)	0.16	59 (100.0)	67 (98.5)	126 (99.2)	0.35	42 (100.0)	47 (95.9)	89 (97.8)	0.19
MDA	Pos	0 (0.0)	2 (2.4)	2 (1.2)		0 (0.0)	1 (1.5)	1 (0.8)		0 (0.0)	2 (4.1)	2 (2.2)	
	Tot	81 (49.4)	83 (50.6)	164 (100.0)		59 (46.5)	68 (53.5)	127 (100.0)		42 (46.2)	49 (53.8)	91 (100.0)	
THC	Neg	81 (100.0)	81 (97.6)	162 (98.8)	0.16	59 (100.0)	66 (97.1)	125 (98.4)	0.18	40 (95.2)	48 (98.0)	88 (96.7)	0.47
	Pos	0 (0.0)	2 (2.4)	2 (1.2)		0 (0.0)	2 (2.9)	2 (1.6)		2 (4.8)	1 (2.0)	3 (3.3)	
	Tot	81 (49.4)	83 (50.6)	164 (100.0)		59 (46.5)	68 (53.5)	127 (100.0)		42 (46.2)	49 (53.8)	91 (100.0)	
COC	Neg	81 (100.0)	83 (100.0)	164 (100.0)	N/A	59 (100.0)	68 (100.0)	127 (100.0)	N/A	42 (100.0)	49 (100.0)	91 (100.0)	N/A
	Pos	0 (0.0)	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	0 (0.0)	
	Tot	81 (49.4)	83 (50.6)	164 (100.0)		59 (46.5)	68 (53.5)	127 (100.0)		42 (46.2)	49 (53.8)	91 (100.0)	
OPI	Neg	72 (88.9)	77 (92.8)	149 (90.9)	0.39	56 (94.9)	63 (92.6)	119 (93.7)	0.60	40 (95.2)	44 (89.8)	84 (92.3)	0.33
	Pos	9 (11.1)	6 (7.2)	15 (9.1)		3 (5.1)	5 (7.4)	8 (6.3)		2 (4.8)	5 (10.2)	7 (7.7)	
	Tot	81 (49.4)	83 (50.6)	164		59 (46.5)	68	127		42 (46.2)	49	91 (100.0)	

				(100.0)			(53.5)	(100.0)			(53.8)		
BAR	Neg	79 (100.0)	72 (100.0)	151 (100.0)	N/A	56 (98.2)	60 (100.0)	116 (99.1)	0.30	40 (100.0)	46 (100.0)	86 (100.0)	N/A
	Pos	0 (0.0)	0 (0.0)	0 (0.0)		1 (1.8)	0 (0.0)	1 (0.9)		0 (0.0)	0 (0.0)	0 (0.0)	
	Tot	79 (52.3)	72 (47.7)	151 (100.0)		57 (48.7)	60 (51.3)	117 (100.0)		40 (46.5)	46 (53.5)	86 (100.0)	
BZD	Neg	72 (88.9)	73 (89.0)	145 (89.0)	0.98	52 (89.7)	61 (89.7)	113 (89.7)	0.99	38 (90.5)	45 (93.8)	83 (92.2)	0.56
	Pos	9 (11.1)	9 (11.0)	18 (11.0)		6 (10.3)	7 (10.3)	13 (10.3)		4 (9.5)	3 (6.3)	7 (7.8)	
	Tot	81 (49.7)	82 (50.3)	163 (100.0)		58 (46.0)	68 (54.0)	126 (100.0)		42 (46.7)	48 (53.3)	90 (100.0)	
PCP	Neg	75 (96.2)	71 (98.6)	146 (97.3)	0.35	55 (98.2)	60 (100.0)	115 (99.1)	0.30	37 (94.9)	46 (100.0)	83 (97.6)	0.12
	Pos	3 (3.8)	1 (1.4)	4 (2.7)		1 (1.8)	0 (0.0)	1 (0.9)		2 (5.1)	0 (0.0)	2 (2.4)	
	Tot	78 (52.0)	72 (48.0)	150 (100.0)		56 (48.3)	60 (51.7)	116 (100.0)		39 (45.9)	46 (54.1)	85 (100.0)	
MTD	Neg	77 (97.5)	71 (98.6)	148 (98.0)	0.62	55 (98.2)	59 (98.3)	114 (98.3)	0.96	39 (97.5)	45 (97.8)	84 (97.7)	0.92
	Pos	2 (2.5)	1 (1.4)	3 (2.0)		1 (1.8)	1 (1.7)	2 (1.7)		1 (2.5)	1 (2.2)	2 (2.3)	
	Tot	79 (52.3)	72 (47.7)	151 (100.0)		56 (48.3)	60 (51.7)	116 (100.0)		40 (46.5)	46 (53.5)	86 (100.0)	
OXY	Neg	76 (96.2)	71 (98.6)	147 (97.4)	0.36	56 (100.0)	58 (96.7)	114 (98.3)	0.17	39 (97.5)	44 (95.7)	83 (96.5)	0.64
	Pos	3 (3.8)	1 (1.4)	4 (2.6)		0 (0.0)	2 (3.3)	2 (1.7)		1 (2.5)	2 (4.3)	3 (3.5)	
	Tot	79 (52.3)	72 (47.7)	151 (100.0)		56 (48.3)	60 (51.7)	116 (100.0)		40 (46.5)	46 (53.5)	86 (100.0)	
ETO H	Neg	81 (100.0)	83 (100.0)	164 (100.0)	N/A	59 (100.0)	68 (100.0)	127 (100.0)	N/A	42 (100.0)	49 (100.0)	91 (100.0)	N/A
	Pos	0 (0.0)	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	0 (0.0)		0 (0.0)	0 (0.0)	0 (0.0)	
	Tot	81 (49.4)	83 (50.6)	164 (100.0)		59 (46.5)	68 (53.5)	127 (100.0)		42 (46.2)	49 (53.8)	91 (100.0)	

Note.

Neg: Negative
Pos: Positive
Tot: Total
MET: Methamphetamine (MET)
ECS: Ecstasy (ECS)
AMP: Amphetamine (AMP)
MDA: Methylenedioxyamphetamine (MDA)
THC: Marijuana (THC)
COC: Cocaine (COC)
OPI: Opiates (OPI)
BAR: Barbiturates (BAR)
BZD: Benzodiazepines (BZD)
PCP: Phencyclidine (PCP)
MTD: Methadone (MTD)
OXY: Oxycodone (OXY)
ETOH: Alcohol

eTable 4: Effect of rTMS Treatment on Secondary Outcomes (Intention to Treat)

Outcome	Results	----End of rTMS Treatment----			----End of 24-week Follow-up----		
		Active (n=81)	Sham (n=83)	P Value	Active (n=81)	Sham (n=83)	P Value
HRSD17 ≤ 7	Not Remitted	57 (70.4)	59 (71.1)	0.92	67 (82.7)	69 (83.1)	0.94
n (%)	Remitted	24 (29.6)	24 (28.9)		14 (17.3)	14 (16.9)	
	Total	81 (49.4)	83 (50.6)		81 (49.4)	83 (50.6)	
HRSD17 ≤ 8	Not Remitted	48 (59.3)	53 (63.9)	0.55	63 (77.8)	68 (81.9)	0.51
n (%)	Remitted	33 (40.7)	30 (36.1)		18 (22.2)	15 (18.1)	
	Total	81 (49.4)	83 (50.6)		81 (49.4)	83 (50.6)	
MADRS ≤ 9	Not Remitted	48 (59.3)	47 (56.6)	0.73	59 (72.8)	61 (73.5)	0.92
n (%)	Remitted	33 (40.7)	36 (43.4)		22 (27.2)	22 (26.5)	
	Total	81 (49.4)	83 (50.6)		81 (49.4)	83 (50.6)	
BDI ≤ 9	Not Remitted	56 (69.1)	56 (67.5)	0.82	61 (75.3)	64 (77.1)	0.79
n (%)	Remitted	25 (30.9)	27 (32.5)		20 (24.7)	19 (22.9)	
	Total	81 (49.4)	83 (50.6)		81 (49.4)	83 (50.6)	

Note. Remission rates were calculated based on 164 randomized participants. If a score was missing, the participant was considered as not remitted
 HRSD17 ≤ 7: 17 Item Hamilton Rating Scale for Depression less than or equal to 7

HRSD17 \leq 8: 17 Item Hamilton Rating Scale for Depression less than or equal to 8
MADRS \leq 9: Montgomery-Asberg Depression Rating Scale less than or equal to 9
BDI \leq 9: Beck Depression Inventory less than or equal to 9

eTable 5: Effect of rTMS Treatment by Gender

Outcome	Results	Male			Female			Total (n=164)	Mantel-H aenszel P value
		Active (n=67)	Sham (n=65)	P Valu e	Active (n=14)	Sham (n=18)	P Valu e		
HRSD 24 ≤ 7	Not Remitted	54 (80.6)	51 (78.5)	0.76	11 (78.6)	14 (77.8)	0.96	130 (79.3)	0.77
	Remitted	13 (19.4)	14 (21.5)		3 (21.4)	4 (22.2)		34 (20.7)	
	Total	67 (40.9)	65 (39.6)		14 (8.5)	18 (11.0)		164 (100.0)	
HRSD 24 ≤ 8	Not Remitted	52 (77.6)	49 (75.4)	0.76	9 (64.3)	11 (61.1)	0.85	121 (73.8)	0.73
	Remitted	15 (22.4)	16 (24.6)		5 (35.7)	7 (38.9)		43 (26.2)	
	Total	67 (40.9)	65 (39.6)		14 (8.5)	18 (11.0)		164 (100.0)	
HRSD 24 ≤ 10	Not Remitted	42 (62.7)	44 (67.7)	0.55	6 (42.9)	8 (44.4)	0.93	100 (61.0)	0.57
	Remitted	25 (37.3)	21 (32.3)		8 (57.1)	10 (55.6)		64 (39.0)	
	Total	67 (40.9)	65 (39.6)		14 (8.5)	18 (11.0)		164 (100.0)	

Note. Remission rates were calculated based on 164 randomized participants. If a score was missing, the participant was considered as not remitted.

HRSD24 ≤ 7: 24 Item Hamilton Rating Scale for Depression less than or equal to 7

HRSD24 ≤ 8: 24 Item Hamilton Rating Scale for Depression less than or equal to 8

HRSD24 ≤ 10: 24 Item Hamilton Rating Scale for Depression less than or equal to 10

eTable 6: Effect of rTMS Treatment on Secondary Outcomes (Intention to Treat) by PTSD Status, End of rTMS Treatment

Outcome	Results	PTSD		P Value	No PTSD		P Value
		Active (n=40)	Sham (n=41)		Active (n=41)	Sham (n=42)	
HRSD17 ≤ 7	Not Remitted	31 (77.5)	32 (78.0)	0.95	26 (63.4)	27 (64.3)	0.93
n (%)	Remitted	9 (22.5)	9 (22.0)		15 (36.6)	15 (35.7)	
	Total	40 (24.4)	41 (25.0)		41 (25.0)	42 (25.6)	
HRSD17 ≤ 8	Not Remitted	26 (65.0)	29 (70.7)	0.58	22 (53.7)	24 (57.1)	0.75
n (%)	Remitted	14 (35.0)	12 (29.3)		19 (46.3)	18 (42.9)	
	Total	40 (24.4)	41 (25.0)		41 (25.0)	42 (25.6)	
MADRS ≤ 9	Not Remitted	27 (67.5)	23 (56.1)	0.29	21 (51.2)	24 (57.1)	0.59
n (%)	Remitted	13 (32.5)	18 (43.9)		20 (48.8)	18 (42.9)	
	Total	40 (24.4)	41 (25.0)		41 (25.0)	42 (25.6)	
BDI ≤ 9	Not Remitted	30 (75.0)	28 (68.3)	0.50	26 (63.4)	28 (66.7)	0.76
n (%)	Remitted	10 (25.0)	13 (31.7)		15 (36.6)	14 (33.3)	
	Total	40 (24.4)	41 (25.0)		41 (25.0)	42 (25.6)	

Note. Remission rates were calculated based on 164 randomized participants. If a score was missing, the participant was considered as not remitted.

HRSD17 \leq 7: 17 Item Hamilton Rating Scale for Depression less than or equal to 7
HRSD17 \leq 8: 17 Item Hamilton Rating Scale for Depression less than or equal to 8
MADRS \leq 9: Montgomery-Asberg Depression Rating Scale less than or equal to 9
BDI \leq 9: Beck Depression Inventory less than or equal to 9
QIDS \leq 5: Quick Inventory of Depressive Symptomatology less than or equal to 5

eTable 7: Effect of rTMS Treatment on Secondary Outcomes (Intention to Treat) by PTSD Status, End of 24-Week Follow-Up

		PTSD			No PTSD		
Outcome	Results	Active (n=40)	Sham (n=41)	P Value	Active (n=41)	Sham (n=42)	P Value
HRSD17 ≤ 7	Not Remitted	38 (95.0)	38 (92.7)	0.66	29 (70.7)	31 (73.8)	0.75
n (%)	Remitted	2 (5.0)	3 (7.3)		12 (29.3)	11 (26.2)	
	Total	40 (24.4)	41 (25.0)		41 (25.0)	42 (25.6)	
HRSD17 ≤ 8	Not Remitted	37 (92.5)	38 (92.7)	0.97	26 (63.4)	30 (71.4)	0.44
n (%)	Remitted	3 (7.5)	3 (7.3)		15 (36.6)	12 (28.6)	
	Total	40 (24.4)	41 (25.0)		41 (25.0)	42 (25.6)	
MADRS ≤ 9	Not Remitted	35 (87.5)	35 (85.4)	0.78	24 (58.5)	26 (61.9)	0.75
n (%)	Remitted	5 (12.5)	6 (14.6)		17 (41.5)	16 (38.1)	
	Total	40 (24.4)	41 (25.0)		41 (25.0)	42 (25.6)	
BDI ≤ 9	Not Remitted	33 (82.5)	33 (80.5)	0.82	28 (68.3)	31 (73.8)	0.58
n (%)	Remitted	7 (17.5)	8 (19.5)		13 (31.7)	11 (26.2)	
	Total	40 (24.4)	41 (25.0)		41 (25.0)	42 (25.6)	

Note. Remission rates were calculated based on 164 randomized participants. If a score was missing, the participant was considered as not remitted.

HRSD17 \leq 7: 17 Item Hamilton Rating Scale for Depression less than or equal to 7
HRSD17 \leq 8: 17 Item Hamilton Rating Scale for Depression less than or equal to 8
MADRS \leq 9: Montgomery-Asberg Depression Rating Scale less than or equal to 9
BDI \leq 9: Beck Depression Inventory less than or equal to 9