

EFFECTS ON COGNITIVE FUNCTION IN TREATMENT RESISTANT BIPOLAR DEPRESSION: ECT COMPARED TO ALGORITHM BASED PHARMACOLOGICAL TREATMENT

U. Kessler^{1,2}, **H.K. Schoeyen**^{2,3}, **O.A. Andreassen**^{4,5}, **G.E. Eide**^{6,7}, **Å. Hammar**^{1,8}, **U.F. Malt**^{9,10}, **K.J. Oedegaard**^{1,2}, **G. Morken**^{11,12}, **K. Sundet**^{5,13}, **A.E. Vaaler**^{11,12}

¹Moodnet Research Group, Haukeland University Hospital, Psychiatric Division, ²Department of Clinical Medicine, Section of Psychiatry, University of Bergen, Bergen, ³Moodnet Research Group, Psychiatric Division, Stavanger University Hospital, Stavanger, ⁴Division of Mental Health and Addiction, Oslo University Hospital, ⁵Institute of Clinical Medicine, University of Oslo, Oslo, ⁶Centre for Clinical Research, Haukeland University Hospital, ⁷Department of Public Health and Primary Health Care, ⁸Department of Biological and Medical Psychology, University of Bergen, Bergen, ⁹Institute of Psychiatry, University of Oslo, ¹⁰Department of Neuropsychiatry and Psychosomatic Medicine, Oslo University Hospital, Rikshospitalet, Oslo, ¹¹Department of Neuroscience, Faculty of Medicine, NTNU, ¹²Division of Psychiatry, St. Olav's University Hospital, Trondheim, ¹³Department of Psychology, University of Oslo, Oslo, Norway

Introduction: Electroconvulsive therapy (ECT) is a treatment alternative in bipolar disorder (BD) depression. Cognitive side effects are the major concern limiting its use.

Objectives: We present data from the Norwegian randomized controlled trial of ECT in treatment resistant depression in bipolar disorder.

Aims: To compare effects on cognitive function of ECT or algorithm based pharmacological treatment at the end of a six-week acute, BD depression treatment trial.

Methods: Prospective, randomised controlled multi-centre, six-week acute treatment trial. Pre- and post-treatment assessments with the MATRICS Consensus Cognitive Battery (MCCB); a neuropsychological test battery designed to be sensitive to changes in cognitive function.

Sample: N = 51 patients ≥ 18 years fulfilling criteria for treatment resistant BD depression (MADRS score ≥ 25).

Intervention: ECT group: Three sessions per week for up to six weeks, total up to 18 sessions, and right unilateral electrode placement. Algorithm-based pharmacological treatment group: Based on Goodwin & Jamison, 2007.

Results: Both groups showed a net gain on MCCB scores without significant differences between the study groups. Mean change in MCCB composite T-score was 4.0 (5.7) in the ECT group and 2.7 (3.6) in the pharmacological group (F = 0.78, $\eta^2 = 0.021$, p = 0.383).

Conclusion: In treatment resistant BD depression ECT and algorithm-based pharmacological treatment have comparable effects on cognitive function assessed with the MATRICS.