P-1375 - LONGITUDINAL ASSESSMENT OF ECT-INDUCED BRAIN STRUCTURE CHANGESLONGITUDINAL ASSESSMENT OF ECT-INDUCED BRAIN STRUCTURE CHANGES

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Introduction: Many MRI studies have cited major depression, with or without anti-depressive treatment, associated with structural plasticity changing in several brain regions. Few of these studies researched the effect of the anti-depressive treatment, electroconvulsive therapy (ECT), on depression.
Objective: To assess the influence of ECT on the brain structure change during the treatment process by utilizing the voxel-based morphometry (VBM) analysis.
Aims: To determine whether ECT alter brain structure.
Methods: We performed HAMD ratings and MRI scans on 12 depressive patients during ECT, analyzing the data by VBM with SPM8 software's family-wise error correction (FWE).
Results: The researchers found volumes changes in white matter in 37 regions between pre-ECT and post-ECT1, but only one region changing between pre-ECT and post-ECT8. Seven regions changing in grey matter between pre-ECT and post-ECT 1□but none regions changing between pre-ECT and post-ECT8.
Conclusions: The density changes in several brain regions after a single ECT stimuli, but return to the original level after completing the eighth ECT. Our finding supports that ECT may play a temporary role in treating major depression but do not permanently alter the structures of brain.

https://doi.org/10.1016/S0924-9338(12)75542-6 Published online by Cambridge University Press