

European College of Neuropsychopharmacology (ECNP) – press release

Electroconvulsive Therapy shown to significantly reduce suicide risk in Bipolar patients

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Type of study: peer reviewed/observational study/people

One of the largest ever studies of patients with untreatable bipolar disorder has shown that ECT (Electroconvulsive Therapy) was able to reduce suicide risk by 84% in high-risk patients, as well as giving effective treatment to around 72% of sufferers.

Bipolar disorder, where patients exhibit emotional instability and may experience very severe mood swings, is amongst the most common mental health disorders. It affects around 1% of Europeans, meaning that approximately 5 million Europeans suffer. Bipolar disorder can cause mixed states of mania and depression; this mix can lead to an increased risk of suicide, since sufferers may simultaneously experience both the symptoms of depression (such as the sense of guilt and worthlessness) and symptoms of mania (such as increased activity and tendency to act without thinking twice). Most patients can control the condition via prescription drugs, but almost a third of patients are resistant to treatment.

Now the largest-ever study to follow bipolar patients and treatment from a single centre has confirmed that ECT can reduce suicide risk, and allow a majority of patients affected by treatment-resistant bipolar disease to return to a more normal life. This work is presented at the ECNP conference, after part-publication in the peer-reviewed journal *The World Journal of Biological Psychiatry**.

Between January 2006 and July 2019, 670 patients were referred to the University of Pisa psychiatry clinic for ECT treatment for bipolar disorder. Dr Giulio Emilio Brancati, of the Department of Clinical and Experimental Medicine at the University of Pisa, said *“ECT was invented in Italy, but despite this there are very few clinics in Italy which offer the treatment nowadays. A lot of patients who have failed with other treatments are referred to the Pisa clinic, which is why we were able to gather so much data from a single clinic”*.

The treatment showed great success in treating bipolar sufferers, with remission rates of over 60% for symptoms characteristic of bipolar “mixed states”, such as emotional overreactivity, motor hyperactivity, aggressiveness and persecutory delusions, uncooperativeness, catatonia and associated movement disturbances.

“Most importantly, 77 of our patients were classified as being at severe risk of suicide. After treatment only 2 remained at severe risk, while 65 showed no risk at all. This is an 84% drop in suicidality after ECT treatment. We have not found this level of acute improvement with any other treatment”, said Giulio Brancati. He continued:

“This is a real-life study, not a clinical trial. A formal trial would have been difficult and probably unethical in these patients, many of who were severely ill. They were generally referred to us only after multiple treatment failures, so most of these patients were running out of treatment options. When we sampled the patients who came to us we found that around 93% had tried and failed with pharmacological treatment, 88% had failed on 2 different drugs. In fact, on average each patient who came to us had tried 5 different drugs, without success”.

The public tends to have a negative view of ECT, largely based on media representation of the very different psychiatric world of the 1950s, but patients and psychiatrists are generally positive about the effects of ECT on otherwise untreatable or difficult to treat mental health conditions. Modern ECT is given under general anaesthetic, and can lead to rapid recovery from Major Depression (the main side effect is a possible transitory loss of recent memory). It's normally given 2 to 3 times per week, with between 6 and 16 treatments needed to show a positive effect. The use of ECT in general has recently dropped by around a third in the USA. This is despite the success of the treatment and the willingness of famous sufferers, such as Carrie Fisher, to come forward and talk about their treatment. Despite ECT being invented in Italy, the use of the technique is extremely restricted, leading to Italy having fewer centres specialising in ECT than most other countries of comparable size.

“ECT is used for major depression, but much less so for the other phases of Bipolar Disorder, especially for so-called mixed states, which have a lower visibility. We find that many patients with treatment resistant bipolar catatonic and mixed states are misdiagnosed as having schizophrenia. These patients need to be given a chance via receiving the right treatment”, said Giulio Brancati.

Commenting, Dr Henricus Ruhe, psychiatrist at Radboudumc Netherlands, and Chair of the ECNP Abstract and Poster Committee, said:

“This study again shows that ECT can be a life-saving treatment and should not be withheld to patients suffering from difficult to treat mood disorders such as bipolar disorder. Although we should acknowledge adverse effects like (mostly temporary) memory impairments, these results show how well, and often how fast the response to ECT can be.

This effectiveness generally outweighs the adverse effects in these severely ill patients, who otherwise might suffer for much longer or not have effective treatment at all. Unfortunately, despite the long-term evidence, ECT is still viewed as a controversial treatment by the general public and the media, but also by many patients and relatives. This is also the case in Italy where very few centres can offer ECT nowadays. This prejudice against modern ECT unjustly stigmatizes both patients and psychiatry, and denies treatment to seriously-ill patients”.

This is an independent comment, Dr Ruhe was not involved in this work.

*See <https://www.tandfonline.com/doi/full/10.1080/15622975.2020.1770860>

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Notes for Editors

European College of Neuropsychopharmacology (ECNP)

The ECNP is an independent scientific association dedicated to the science and treatment of disorders of the brain. It is the largest non-institutional supporter of applied and translational neuroscience research and education in Europe. Website: www.ecnp.eu

The 33rd annual ECNP Congress – ECNP Virtual - takes place from 12th to 15th September. It is Europe's premier scientific meeting for disease-oriented brain research. In 2020 it is a virtual congress. The regular congress annually attracting up to 6,000 neuroscientists, psychiatrists, neurologists and psychologists from around the world. Congress website: <https://www.ecnp.eu/Congress2020> The 2021 congress is scheduled to take place in Lisbon next September.

Conference Abstract P.310 Response to electroconvulsive therapy of different clinical features in 670 bipolar patients with depression or mixed state

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Objectives: The efficacy of electroconvulsive therapy (ECT) on single clinical features has been rarely investigated, except for suicidality [1]. Our aim was to assess the differential impact of ECT on single depressive and mixed symptoms or signs in a large sample of bipolar patients.

Methods: Six hundred and seventy bipolar patients admitted to our Psychiatry Clinic to receive ECT between January 2006 and July 2019 were included in the study. Adult age (≥ 18 years), bipolar disorder according to DSM-5, a positive score for major depressive episode (HDRS17 ≥ 8) [2] and having received at least 3 ECT treatments were considered as inclusion criteria. 131 patients (20%) scored ≥ 20 at the YMRS [3], thus satisfying DSM-IV requirements for a mixed episode diagnosis. Brief-pulse bilateral ECT was delivered on a twice-a-week schedule. The Brief Psychiatric Rating Scale Expanded Version (BPRS-EV) [4-5], a clinician-rated scale comprising 24 items to assess a wide range of psychopathological constructs, was used to evaluate ECT efficacy on single symptoms or signs severity. For each construct, response and remission rates were determined among patients reaching high severity scores (≥ 5 ; i.e. moderately to extremely severe) for the corresponding BPRS-EV item before treatment. Response rate was computed as the proportion of patients presenting a reduction in symptom severity after treatment (i.e. item score < 5), remission rate was defined as the proportion of patients in which the symptom was no more present or only very mild after treatment (i.e. item score ≤ 2). Pre-treatment and post-treatment scores on each item were compared using paired-sample Wilcoxon signed-rank test in the whole sample. According to Bonferroni correction, alpha level was set to 0.002.

Results: All the item reached a high severity score in more than 5% of patients, except for severe grandiosity, which was observed only in 18 patients (3%). Depression, anxiety, unusual thought and blunted affect were rated as severe in more than one third of the whole sample. All the psychopathological constructs investigated, showed response rates higher than 80%, with the highest rates of response observed for motor hyperactivity, grandiosity, excitement, tension, suicidality, bizarre behaviour and guilt ($> 95\%$). Suicidality showed the highest remission rate, with 84.4% of patients at high risk of suicide before treatment, which were no more overtly suicidal after ECT. Similarly, severe mannerisms and posturing, uncooperativeness, hostility, excitement, motor hyperactivity and suspiciousness were found highly remitting ($> 60\%$). On the opposite, depression, blunted affect, unusual thought, somatic concern, anxiety and self-neglect, which was remitting in only 27.4% of severely impaired patients, could be considered slightly remitting features ($< 40\%$). Overall, all clinical features scores were significantly decreased after ECT ($p < 0.002$), with the largest effects observed for depression, anxiety, self-neglect, guilt, suicidality, tension, blunted affect and motor retardation ($r = 0.67-0.82$).

Conclusions: All clinical features were substantially improved after ECT. Suicidality, catatonic and mixed features showed the highest remission rates. ECT should be considered a highly efficacious treatment for seriously impaired patients showing severe motor, affective or cognitive disturbances.

References

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No conflict of interest