



**PRESS RELEASE**

European Congress of Psychiatry 2024

**Electroconvulsive therapy (ECT) shown to reduce severity of certain mental illnesses**

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Researchers have found that Electroconvulsive Therapy (ECT), where an electric current is passed through the brain, can reduce the severity of mental illnesses.

ECT is a safe and effective treatment for some mental illnesses including severe/psychotic depression, postnatal psychosis and mania.<sup>1,2</sup> Patients are placed under general anaesthetic and the brain is stimulated with short electric pulses.<sup>3</sup> This causes a brief seizure which lasts for less than two minutes.<sup>3</sup>

The use of ECT across Scotland was assessed over an 11-year period from 2009 to 2019 using data from the Scottish Electroconvulsive Therapy (ECT) Audit Network (SEAN). The Scotland-wide naturalistic study assessed the efficacy and side effects of ECT across a range of common mental illnesses such as depression, bipolar depression, schizophrenia, and mania.

Key findings from the study include:

- ECT was shown to be effective in reducing illness severity, as measured by Clinical Global Impression Scale (CGI-S). CGI-S is a validated clinician administered assessment tool which measures illness severity.
- 2,920 ECT episodes had CGI-S scores recorded for patients before and after treatment. The mean CGI-S score prior to treatment indicated marked illness severity (5.03 95% CI 4.99-5.07), whilst after treatment, the mean CGI-S score was reduced to 2.07, (95% CI 2.03-2.11) indicating a reduction to borderline illness severity.
- The study also assessed side effects of ECT. Anaesthetic complications and prolonged seizures were rare, occurring in <1% of treatment episodes. Cardiovascular complications were reported in 2.2%. Nausea was reported in 7.2% and muscle aches in 12%. Confusion was reported in 19% and cognitive side effects in 26.2%.

Dr Julie Langan Martin, Senior Clinical Lecturer in Psychiatry, Director of Education at the University of Glasgow, Scotland, said "Our findings from this large naturalistic study across Scotland from over an 11-year period reinforce the widely held, but nonetheless underexplored view, that ECT is both a safe and effective treatment when delivered to appropriate groups of people with severe mental illness. Monitoring of side effects, especially cognitive side effects should be undertaken carefully and rigorously in all patients receiving ECT."

"This study on ECT presents compelling evidence of its effectiveness in reducing the severity of mental illnesses, with major side effects found to be rare. It challenges common misconceptions and stigmas associated with ECT, providing valuable insights that can reshape public perceptions and stimulate informed discussions among healthcare professionals," said Dr Julian Beezhold, Secretary General of the European Psychiatric Association.



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European Congress of Psychiatry 2024

The European Congress of Psychiatry takes place from 6-9 April 2024 in Budapest, Hungary, and represents Europe's largest congress dedicated to psychiatry, with 4000 participants: [epa-congress.org](http://epa-congress.org).

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### Notes to editors

#### **Electroconvulsive Therapy (ECT): A Scotland Wide Naturalistic Study of 4,826 treatment episodes (O0100)**

**Introduction:** Despite its apparent efficacy in the treatment of a range of psychiatric disorders, electroconvulsive therapy (ECT) is viewed by some as a contentious treatment. Although most clinicians and researchers consider ECT a safe and effective treatment, there are ongoing and significantly publicised concerns about potential side effects.

**Objectives:** To explore use of ECT across Scotland in a large naturalistic clinical sample across an 11-year period from 2009 to 2019. To consider the efficacy and side effects of ECT for a range of common psychiatric disorders including, depression, bipolar depression, schizophrenia, and mania.

**Methods:** Using data from the Scottish Electroconvulsive Therapy (ECT) Accreditation Network (SEAN), information was collected for all adults who had received ECT. Variables included age, sex, Scottish Index of Multiple Deprivation (SIMD) quintile, International Classification of Diseases, Tenth Edition (ICD-10) diagnosis, indication for ECT, Mental Health Act status, consent status, entry and exit Montgomery-Asberg Depression Rating Scores (MADRS), entry and exit Clinical Global Index Severity (CGI-S) scores and reported side effects. Side effects were recorded as present if the side effect was reported at any point during the episode of treatment.

**Results:** 4826 ECT episodes were recorded. The majority of episodes were in women (68.4%, n=3,301). Average age at treatment onset was 58.52 years. Males were slightly younger (m=58.24 years vs f= 58.65 years, p= 0.20). Mean number of treatments/episode was 9.59 (95% CI 9.32 – 9.85). Mean treatment dose delivered was 277.75mC (95%CI 272.88 – 282.63mC).

2920 episodes of treatment had CGI-S entry and exit recorded. At entry, mean CGI-S indicated marked illness (5.03 95% CI 4.99-5.07). Recipients with schizophrenia had the highest CGI-S score (5.45 95% CI 5.21-5.60), followed by those with post-partum disorders (5.38, 95% CI 4.61-6.14). At exit, mean CGI scores indicated borderline illness (2.07, 95% CI 2.03-2.11), recipients diagnosed with mixed affective state had the lowest CGI-S score (1.72, 95% CI 0.99-2.47) followed by those with schizoaffective disorder (2.01, 95% CI 1.76-2.42).

Anaesthetic complications (n=34) and prolonged seizures (n=38) were rare, occurring in <1% of treatment episodes. Cardiovascular complications were reported in 2.2% (n= 102). Nausea was reported in 7.2% (n= 334) and muscle aches in 12% (n=560). Confusion was reported in 19% (n=879) and cognitive side effects were reported in 26.2% (n=1212). One third of treatment episodes reported confusion or cognitive side effects (33.1%, n=1545).



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Conclusions: From this large naturalistic clinical sample, ECT appears to be effective in improving illness severity as measured by CGI-S score. While some side effects (such as prolonged seizures and cardiovascular complications) were rare, others (such as confusion or cognitive side effects) were relatively common.

Disclosure of interest: None declared.

### About the European Psychiatric Association

With active individual members in as many as 88 countries and 44 National Psychiatric Association Members who represent more than 78,000 European psychiatrists, the European Psychiatric Association is the main association representing psychiatry in Europe. The EPA's activities address the interests of psychiatrists in academia, research and practice throughout all stages of career development. The EPA deals with psychiatry and its related disciplines and focuses on the improvement of care for the mentally ill as well as on the development of professional excellence. More information: <https://www.europsy.net/>

### References

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<sup>1</sup> Park MJ, Kim H, Kim EJ, Yook V, Chung IW, Lee SM, Jeon HJ. Recent Updates on Electro-Convulsive Therapy in Patients with Depression. *Psychiatry Investig.* 2021 Jan;18(1):1-10. doi: 10.30773/pi.2020.0350. Epub 2021 Jan 19. PMID: 33321557; PMCID: PMC7897863.

<sup>2</sup> Elias A, Thomas N, Sackeim HA. Electroconvulsive Therapy in Mania: A Review of 80 Years of Clinical Experience. *Am J Psychiatry.* 2021 Mar 1;178(3):229-239. doi: 10.1176/appi.ajp.2020.20030238. Epub 2020 Nov 10. PMID: 33167675.

<sup>3</sup> Electroconvulsive therapy (ECT). Royal College of Psychiatrists. Available at: [www.rcpsych.ac.uk/mental-health/treatments-and-wellbeing/ect](http://www.rcpsych.ac.uk/mental-health/treatments-and-wellbeing/ect) (Accessed: February 2024).