

**Case Report****Efficacy Of Electroconvulsive Therapy In Obsessive Compulsive Symptoms**  
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**Abstract**

Electroconvulsive therapy (ECT) is not considered a first line treatment for management of obsessive compulsive disorder. ECT has been indicated to be an effective treatment for treatment resistant Obsessive compulsive disorder. This report describes the case of a woman with severe OCD from 3 years, not showing improvement with combined pharmacotherapy and psychotherapy. She was treated with modified ECT and improved miraculously.

**Key words:** Obsessive compulsive disorder, Electroconvulsive therapy, Pharmacotherapy, Psychotherapy

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**Introduction**

Obsessive Compulsive Disorder (OCD) is a psychiatric disorder that is characteristic of ego dystonic repetitive thoughts and behaviors. Global prevalence rate in general population is approximately 2%.<sup>(1)</sup> Equal prevalence is observed among both males and females. However, its prevalence in India amounts to be approximately 0.6%.<sup>(2)</sup>

As Cognitive behavioral therapy (CBT) and pharmacotherapy have been considered as the first line treatment, yet symptoms persist in approximately 40% patients of OCD.<sup>(3)</sup> Although limited evidence is available regarding the management of OCD with ECT, but ECT has been found effective in the treatment of cases with severe OCD.<sup>(4-6)</sup> Here, we are reporting a case of a female patient who met the diagnostic criteria of OCD as per ICD -10. There was a significant improvement in her obsessive compulsive symptoms after modified ECT administration.

**Case Report**

A 32 year old female had gradually developed symptoms of repetitive thoughts of contamination over a period of few months and the symptoms were persistent from 3 years. The symptoms were severe enough from past two years that she was unable to have sexual intimacy with her husband due to fear of contamination. Her social and occupational functioning was severely affected as most of her time used to be spent in her compulsions of cleanliness. The patient had received treatment with different drugs in the past from psychiatrist (records not available), but did not show any improvement.

In 2022, patient presented to our hospital with the complaints of obsessions and compulsions of contamination and cleanliness, respectively. Psychiatric examination revealed prominent obsessive-compulsive symptoms and anxiety. Therefore, she was diagnosed with Obsessive compulsive disorder (OCD).

She was administered both CBT and pharmacotherapy (fluoxetine, fluvoxamine and clomipramine consecutively upto their maximum tolerated dosages) over a period of few months but the patient was not improved. So, an atypical antipsychotic risperidone was tried as adjuvant, but the patient showed no further improvement and the illness remained distressing for her.

Therefore, we recommended mECT on the basis of previous available data for OCD and the patient agreed upon it. Before administering ECT, her Y-BOCS score was 30. Patient was administered 3 mECT procedures on alternate days. The apparatus setting range of pulse width, frequency, duration and charge of ECT were 1msec, 70 Hz, 0.7-0.8 sec and 84mC, respectively. Seizure activity observed in all 3 mECTs was 38 sec, 60 sec and 25 sec respectively. After the first session of mECT, surprisingly, the patient showed drastic improvement and her Y-BOCS score was 5. After the mECT treatments, the patient was discharged from the hospital and her Y-BOCS score was 5 and the patient reported almost complete remission of her symptoms. Maintenance ECTs were planned further but the patient refused as she experienced severe headache and had significant improvement even after the first session. On further follow up visits, patient's condition remained stable on fluvoxamine 100mg/d and clomipramine 75mg daily at night.

**Discussion**

Although ECT is not recommended as the treatment of OCD, case reports indicate that it may be an effective therapy for OCD. ECT has been proved to be an effective therapy for OCD and major depressive disorder (MDD).<sup>(7)</sup> Our patient had a diagnosis of Obsessive compulsive disorder. Her psychopathology did not improve despite the first line pharmacotherapy and CBT administration. We administered ECT to her due to unremitted obsessions and uncontrollable compulsions. She showed dramatic improvement after mECT treatment.

Several hypothesis have been proposed, but the clear mechanism of ECT is not known. Serotonergic and dopaminergic pathways play a pivotal role in the production and maintenance of obsessive compulsive symptoms.<sup>(8,9)</sup> Few studies have explained that some of the brain regions such as dorsolateral prefrontal cortex(DLPFC), orbitofrontal cortex (OFC) and anterior cingulate gyrus (ACC) are involved in volition and decision making. The efficacy of ECT in OCD patients might be explained by this.<sup>(10-12)</sup>

ECT is an effective and safe procedure. Combination of ECT and pharmacotherapy can be a useful treatment option for the management of treatment resistant OCD.

The limitation of this case report is that the efficacy of modified ECT for OCD cannot be confirmed as this report is based on an isolated case. Therefore, studies on large number of cases are needed to confirm the therapeutic effect of ECT in OCD patients.

### Conclusion

OCD is a chronic disorder with fluctuating course. Its management with pharmacotherapy, psychotherapy or their combinations might show little improvement. Thus, ECT combined with pharmacotherapy might prove a method for rapid response in treatment of patient with OCD. This treatment modality may be reconsidered to be tested in the well-designed experimental study.

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