

Excellent Outcome of Psychosis Induced by Methamphetamine Intoxication after 20 Sessions of Electro Convulsive Therapy

Jamshid Ahmadi

Substance Abuse Research Center, Shiraz University of Medical Sciences, Shiraz, Iran



***Corresponding author:** Jamshid Ahmadi, MD, Professor of Psychiatry, Founder and Director, Substance Abuse Research Center, Shiraz University of Medical Sciences, Shiraz, Iran, E-mail: Jamshid_Ahmadi@yahoo.com

Abstract

Severe psychosis induced by methamphetamine abuse is a growing problem in the world. We report the usefulness of Electro Convulsive Therapy (ECT) as an alternative option in the management of methamphetamine psychosis. Our findings indicated that ECT was beneficially employed in the treatment of severe methamphetamine psychosis. This case illustrates although medications could be effective in treating methamphetamine psychosis, however, ECT is more useful and also faster than medications. This is an interesting result. In addition to our understanding we might say that ECT could be an appropriate option in the treatment of methamphetamine psychosis, therefore this experience of an Iranian patient could add innovative information to the literature.

Keywords: Psychosis; Methamphetamine; ECT

Introduction

In recent decades policy makers, health authorities and researchers have expended more time and attention to the epidemiology, prevention and treatment of mental disorders^[1-3] including addictions, especially stimulants abuse^[4-5].

In Iran health decision makers and also researchers pay more attention to mental problems and substance related disorders specially methamphetamine and other amphetamine derivatives^[6,19].

In the past years, methamphetamine was illegally smuggled in from the west countries, but now it is synthesized illegally in Iran in ‘underground’ laboratories. We should stress that the methamphetamine synthesized illegally in Iran has higher potency. Methamphetamine produces a common and ordinary state of well being accompanied by raised energy, physical activity and wakefulness^[20]. Prolonged use often leads to driven drug abuse, long-term health consequences, severe dependency, decreased weight, memory deficits, unstable affect, dysregulated mood, increased aggression, poor concentration, increased violence, hallucinations, delusions, and poor impulse control^[20,21].

Methamphetamine is abused globally. In the United States, 18 million people over age 12 have tried methamphetamine during their life^[20]. As with any abused substance, meth addiction is a chronic relapsing disorder meriting the need for effective pharmacotherapies to aid the prevention of relapse.

Now we are going to report our patient with the diagnosis of psychosis induced by methamphetamine intoxication who responded to 20 sessions of ECT.

Indications of ECT in psychotic conditions^[22,23] and in methamphetamine induced psychosis have been reported previously^[24,25,26].

Patient Presentation

Mr. M.K.Z. was a 27 year old single man, unemployed, graduated from high school, living with his parents in Shiraz city of Fars province in southern Iran. MKZ has been using opioids and benzodiazepines, and also smoking of methamphetamine since five years Prior To Admission (PTA) and several months later developed anxiety, depression, insomnia and restlessness. Since one month PTA, he developed severe agitation, restlessness, suicidal attempts, insomnia, low appetite, aggressive behaviors, hyperactivity, loquaciousness, and persecutory delusions.

He was brought to the emergency room of Ebnesina hospital. Then was admitted in dual diagnosis ward with the impression of methamphetamine induced psychosis with onset during intoxication. At the time of admission complete physical and

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neurological examinations were carried out. Laboratory tests including screening tests for HIV and hepatitis were done which were normal. Based on urine drug screening tests and also personal history he was smoking methamphetamine before hospital admission. Na valproate with dose of 400 mg/d, olanzapine with dose of 10 mg/d was started. After 8 days of admission and due to lack of response to medications and also serious condition of the patient, double ECT (2 ECT sessions in the same anesthesia session) was started. After the tenth ECT, some of the symptoms such as insomnia, restlessness, agitation and delusions improved. After the sixteenth ECT patient was much better and after the twentieth ECT, patient was discharged.

Patient received bilateral ECT in the even days of the week only (Saturday, Monday, and Wednesday). Although patient did not receive optimum therapeutic dose and duration of antipsychotic medications(due to serious and emergency condition of the patient, we could not wait for more time and had to start double ECT), however, according to our daily precise monitoring and interview, patient improvement was due to ECT.

Discussion

Patient had no previous history of psychosis prior to substance abuse and had no family history of psychosis. Onset of psychotic symptoms was due to chronic consumption of methamphetamine only. Patient's family reported period of abstinences from substances in the past. Abstinence from substance had some improvement in symptoms, therefore, possibility of independent psychosis can be ruled out.

This case indicates ECT is very helpful in treating psychosis induced by methamphetamine intoxication. ECT use in psychotic conditions in general^[22,23] and in methamphetamine psychosis in particular have been reported previously^[24,25,26]. However, a systematic prospective trial of ECT especially in refractory methamphetamine induced psychosis is yet to be published, and this case study is a considerable addition to the literature. It is of interest that double ECT continues to be used with good results in serious conditions. We followed the patient for 5 months. He did not report any symptoms of relapse yet.

Conclusion

ECT was practically employed in the treatment of methamphetamine psychosis. We might say that ECT could be a good option in the treatment of methamphetamine psychosis, therefore this case-study could illustrate an innovative information.

Conflict of Interests: None to be declared.

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