### Introduction

Health problems especially psychiatric problems have been growing disorders in the world. In recent decades, mental health authorities and investigators are paying more attention to the epidemiology, etiology, prevention and treatment of mental problems [1-7].

Among psychiatric diseases, substance abuse and substance related disorders, especially stimulants induced disorders are on the rise worldwide and now, stimulants abuse and stimulants induced psychiatric disorders are coming to the attention of psychiatric clinics, and psychiatric hospitals [8-15].

In the past, methamphetamine was illegally imported from the western countries, but now it is illegally synthesized in Iran in ‘underground’ laboratories. It should be stressed that the methamphetamine synthesized in Iran is of higher potency and is usually associated with psychosis. A single episode of abuse could have been accompanied by auditory and visual hallucinations and persecutory delusions.

### Case

Our patient has diagnosis of methamphetamine induced psychosis with onset during intoxication. He positively responded to six sessions of ECT. Mr. A.R.H. was a 30 year old single man, unemployed with education up to third grade of guidance school, living with his parents in Shiraz city of Fars province in southern Iran. He reported family history of depression in his brother, but did not give any psychiatric or medical problem in his past personal history. He has been consuming opium and heroin since one year prior to admission (PTA) and cannabis since 15 years PTA. Since one year PTA, he began methamphetamine use occasionally; however, he increased the frequency of use to daily smoking since five months PTA. He developed paranoid delusion, aggressive behaviors, delusion of control (believing that someone had put camera in his house), poor sleep and appetite, self talking, auditory and visual hallucination.

He was brought to the emergency room of Ebnesina hospital and was admitted in dual diagnosis ward.

At the time of admission, in complete physical and neurological examinations were normal. Laboratory tests including screening tests for HIV and hepatitis were normal.

According to DSM-IV criteria, and also complete medical, psychiatric, and substance use history he was diagnosed as "methamphetamine induced psychosis. Olanzapine with dose of 15 mg/d was started. After six days due to unresponsiveness risperidone with dose of 6 mg/d was started. Two weeks later (in the 20th day of hospital admission) the patient’s symptoms didn't show any significant changes; So, because of serious situation of the patient, double bilateral ECT (2 sessions of ECT in the same session of anesthesia) was begun for the patient. Patient was monitored and interviewed daily. He was interviewed three times a day for withdrawal symptoms. After taking 4 sessions of ECT (in the 24th day of admission) he had no psychotic symptoms. After taking six sessions of ECT he was discharged without any psychotic symptoms (after 28 days of hospital admission). Sessions of ECT were in the even days of the week (Saturday, Monday and Wednesday).

### Discussion

Results of this case study indicate that ECT in methamphetamine induced persistent psychosis has resulted in remission. It appears to be dose dependent.

Our presentation reveals that ECT is useful in treating methamphetamine induced persistent psychosis and methamphetamine withdrawal symptoms.

The maximum dosage of olanzapine is 30 mg/d and of risperidone is 8 mg/d; however, we began ECT because of serious condition of the patient.

Based on DSM-4 criteria, and complete medical, psychiatric, and substance use history, patient was diagnosed as "methamphetamine induced psychosis with onset during intoxication"

Our case study reveals that ECT has beneficial effect in treating methamphetamine induced persistent psychosis and methamphetamine. ECT use in these conditions has been reported previously [9,15]. However, a systematic prospective trial of ECT in methamphetamine induced persistent psychosis is yet to be published, and this report is an important addition to the literature. We conclude that ECT can be useful in the treatment of methamphetamine induced persistent psychosis and methamphetamine withdrawal.

### Abstract

**Background:** Methamphetamine abuse induced disorders are a growing problem in the world

**Objective:** To illustrate the usefulness of ECT (Electroconvulsive Therapy) in the therapy of methamphetamine induces persistent psychosis.

**Results:** ECT has an outstanding outcome in the management of methamphetamine induced persistent psychosis

**Conclusion:** ECT can be a useful treatment modality in this potentially fatal condition.

**Keywords:** Methamphetamine; Persistent Psychosis; ECT
References


