

# Alcohol Withdrawal Craving Treatment with Low Dose of Buprenorphine: A New Experience

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## Abstract

**Background:** Although alcohol use disorders and induced disorders are common in the world, however, only few medications, naltrexone, acamprosate, disulfiram, topiramate and baclofen are recommended for the reduction and cessation of alcohol withdrawal craving. Therefore it is required to develop new medications.

**Objective:** To test the efficacy of low dose of buprenorphine on the reduction or cessation of alcohol withdrawal craving.

**Method:** To evaluate the competence of four mg of buprenorphine in the treatment of alcohol craving in a case.

**Results:** Buprenorphine administration was associated with ending of alcohol craving. In addition, buprenorphine was well endured.

**Discussion:** Our findings demonstrated that buprenorphine has fast-acting and sustained anti-alcohol craving properties. This effect should be replicated in randomized, double-blind, placebo-controlled trials.

**Conclusion:** To our understanding obvious effect of buprenorphine in this condition has not been issued yet.

**Keywords:** Alcohol withdrawal craving; Buprenorphine

## Introduction

Currently, the incidence of psychiatric problems is progressing [1-17]. Considering psychiatric disorders, substance associated disorders, especially alcohol and stimulants induced disorders have been considered as progressive problems [18-58].

Although the number of deaths and other problems caused by drinking of alcohol is raising, however, the number of medications available to treat alcohol use disorders is very low [59]. The FDA indicated use of buprenorphine is for the treatment of pain and opioids withdrawal [1].

Now, we are administering buprenorphine as a new access for the treatment of severe alcohol withdrawal craving, because we think and theorize that (our rationale) biochemistry engaged in opioid dependence is mainly similar to that of alcohol (both substances increase the level of endorphins and enkephalins) [1].

We ourselves prepared a scale of measurement and verified it empirically for reliability and validity [31,46,50-53,55,56] to test the withdrawal craving, ranging from 0 to 10 (0 means no craving at all and 10 means severe craving and desire all the time). In addition, we instructed the subject precisely about scoring.

Validated and reliable Craving Scale: 0-1-2-3-4-5-6-7-8-9-10.

We explained the ability of buprenorphine in the reduction of severe alcohol withdrawal craving (craving as such a symptom of amphetamine and opioid addiction, opioid and cannabis addiction). To our knowledge we could not find published clinical trials on this subject (buprenorphine 4 mg daily for the treatment of alcohol craving) in Iran and also globally, so, report of this work can represent a novel finding.

## Patient Description

AA was a married, 31-year old college graduate and self-employed. He inhabited with his family in Shiraz city of Fars province in the south area of Iran. He began drinking alcohol at the age of 16. He had been

abusing cannabis, methamphetamine, cocaine and benzodiazepine occasionally. Since one year prior to admission (PTA) he has increased the amount of alcohol drinking. He little by little developed depression, suicidal attempts, impulsive behaviors, restlessness, insomnia and agitation. His symptoms were aggravated since few weeks PTA. In short, AA had been a daily heavy alcohol drinker when he was brought to psychiatric hospital.

In detailed psychiatric interview and precise examinations he was very depressed, suicidal, impulsive, restless and agitated. In exact physical and neurological examinations we could not detect any abnormal findings.

Urine drug screening tests were positive for cannabis, methamphetamine and benzodiazepine. Tests of serology for HIV and hepatitis were normal. According to DSM-5 criteria, and also complete medical, psychiatric, and substance use history he was diagnosed as "alcohol induced depressive disorder with severe use disorder". We administered chlorthalidone 20 mg valproate 600 mg, olanzapine 15 mg and chlorpromazine 100 mg daily to treat impulsivity, insomnia, agitation, anxiety, restlessness, and depression.

After five days although his symptoms improved significantly, however, he developed alcohol withdrawal craving. So we administered a low dose of buprenorphine (4 mg daily) to reduce severe alcohol

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withdrawal craving. He was closely interviewed for psychiatric signs and symptoms every day. He was especially monitored and interviewed for alcohol withdrawal craving only, 3 times a day (morning, afternoon, evening). It should be mentioned that before taking buprenorphine he did not report withdrawal craving for any substance except for alcohol. He was discharged after nine days of hospital admission without any significant psychiatric symptoms.

The alcohol craving scores for the nine days of admission were: 1 & 1 & 4 & 10 & 10 (beginning of 4 mg buprenorphine per day) 0 & 0 & 0 & 0, respectively. Based on the interview and closely monitoring (3 times a day), he experienced much more alcohol withdrawal craving before taking buprenorphine (Mean: 5.2) than after taking buprenorphine (Mean: 0).

## Discussion

According to the Iranian drug policy if anyone is found to be abusing illicit substances or illegal drugs (tobacco products are legal), such as, marijuana, hashish, benzodiazepines, opioids, ecstasy, methamphetamine, hallucinogens, cocaine or alcohol, they must be directed to the addiction treatment centers or private clinics or psychiatric hospitals to be treated.

Although patient was also on valproate, olanzapine, chlorthalidopoxide and imbalance of dependence, it is difficult to conclude that craving reduction was only due to buprenorphine, chlorpromazine however, our work indicates that low dose of buprenorphine is effective in reduction and cessation of alcohol withdrawal craving. Using buprenorphine in this situation has not been reported in the past, and this report is a considerable addition to the literature.

## Conclusions

Successful effect of buprenorphine 4 mg daily in this situation has not been reported at an earlier time, and our study is an important addition to the literature

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We were on our own.

## Conflict of interests

Nil

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