Buprenorphine in the treatment of heroin dependence: an originalexcerpt

Jamshid Ahmadi, MD; Professor of Addiction Psychiatry, Founding Director, Substance Abuse Research Center, Dual Diagnosis Ward, Shiraz University of Medical Sciences, Shiraz; Iran

Abstract

**Background**: Heroin dependence is currently a considerable problem.

**Objective**: To portray the efficacy of a single dose of buprenorphine in the management of heroin dependence.

**Results**: 56 mg of buprenorphine is very profitable in the treatment of heroin dependence.

**Discussion**: The current study indicates that a single dose of buprenorphine is very helpful in the diminution and termination of heroin withdrawal symptoms. Hence, our finding is a considerable addition to the literature. Continued study of single dose of buprenorphine administration, is highly recommended for the treatment of opioids dependency.

**Conclusion**: We concluded that buprenorphine is a safe and noticeable drug for the treatment of heroin dependence. We presume that buprenorphine could be much better than traditional treatments, such as slow step down in the dosage or hasty discontinuation of heroin use without administering any drug.

**Key words**: Buprenorphine; Single dose; Heroin withdrawals

1. Introduction

Heroin dependence is commonly treated by buprenorphine or methadone. Buprenorphine is a partial mu receptor agonist. It has been under intensive assessment for the treatment of heroin dependence since the late 1970s (1). Reports from the United States, comparing buprenorphine with methadone for the management of heroin dependence, clarify the safety and efficacy of buprenorphine in comparing to methadone (2, 3, and 4). Investigators and researchers like Johnson, Jaffe, and Fudala illuminated that 8 mg of buprenorphine dailywas comparable to 60 mg of methadone regarding opiate negative urine and retention rate (5). Buprenorphine is well absorbed when used sublingually; reaching 60%–70% of the plasma concentration, but less than 10% is absorbed if used orally. Since buprenorphine is a partial agonist and has ceiling, therefore, its use has less physical dependence and low possibility of toxicity and overdose. Buprenorphine diminish the incidence of HIV and other complications resulting from heroin abuse. Detoxification from buprenorphine is more comfortable than methadone (1, 6, 7). Heroin is derived from opium and is an opioid mu receptor agonist. It was earlier described as a non-addictive derivative form of morphine (8). Opium has been used for a long time and has a lengthy history of medical, recreational and social approval in some regions of the globe, such as Asia, North America and Europe (9, 10).

Nowadays, mental health disorders are going up universally (11-29). Among psychiatric diseases, substance related disorders, and especially opioids and stimulants joined diseases have been regarded as expanding dilemma worldwide. In recent years, substance associated psychiatric disorders are an advancing problem and have resulted more referrals to addiction centers and psychiatric hospitals (30-105). Food and Drug Administration approved buprenorphine for the treatment of pain, and opioids withdrawal symptoms (8).
We are now practicing a single dose of 56 mg of buprenorphine for diminution and cleaning up of heroin withdrawal symptoms and craving. There are not adequate published studies on this topic, therefore, this study may result to a new conclusion.

Based on DSM-5 we prepared a reliable and valid questionnaire (30, 32, 42) to measure heroin withdrawal pain and craving, including scores from 0 to 10 (0 means no pain or craving at all and 10 means severe pain or craving all the time).

Pain and Craving Scale of measurement: 0-1-2-3-4-5-6-7-8-9-10.

**Patient manifestation**

We display a heroin dependent patient who essentially answered to a single dose of 56 mg of buprenorphine.

AN was a single 24 year old unemployed with 3rd grade of secondary school education. He lived with his family in Kazeroon city of Fars province in southern Iran.

He commenced smoking tobacco and drinking alcohol at age of 15. Then, 3 months later began smoking heroin. AN had occasionally experienced marijuana, hashish and methamphetamine.

Before admission he was drinking alcohol and smoking heroin.

At the time of admission he was hopeless, depressed, irritable, anxious and impulsive. AN had history of self-injury and suicidal attempts. Due to depression, anxiety, irritability, agitation and impulsive behaviors he was admitted in psychiatric ward.

During comprehensive psychiatric interview and mental status examination he had depressed mood, agitation and insomnia. In precise physical and neurological examinations we could not find any significant abnormal findings.

Tests of serology for viral markers (HIV, HCV and HB Ag) were normal.

Urine drug screening tests were positive for morphine and methadone.

According to the comprehensive medical, psychiatric, and substance use history and DSM-5 criteria he was diagnosed as "opioid related depressive disorder, and also opioid (heroin), and alcohol dependent.

In the beginning of admission, he received venlafaxine 225 mg, sodium valproate 1000 mg, olanzapine 30 mg melatonin 6 mg and chlorpromazine 100 mg per day for the treatment of depression, agitation and insomnia.

We administered clonidine 0.3 mg, baclofen 75 mg, and ibuprofen (non-steroidal anti-inflammatory drug) 1200 mg per day for the management of heroin withdrawal symptoms.

On the fifth day of admission he reported heroin withdrawal pain and craving, so he received buprenorphine 56 mg as a single dose only.

The mean of withdrawal pain before a single dose of 56 mg of buprenorphine administration was 6.7 and after administration was 0.25 and also the mean of withdrawal craving was 3 before administration and 0.13 after administration.

With reference to the close monitoring, measurement and interview (3 times a day) for heroin withdrawal pain and craving the experienced a declining level of pain and craving following administration of a single dose of buprenorphine.

He was discharged without any significant heroin withdrawal symptoms after 12 days of admission.

**Discussion**

The current study indicates that buprenorphine 56 mg as a single dose is very helpful in the diminution and ending of heroin withdrawal symptoms. Hence, our finding is a considerable addition to the literature.

**Conclusions**

A single dose of buprenorphine could regulate heroin withdrawal symptoms.
We presume that buprenorphine is a safe and noticeable drug for the treatment of heroin dependence. We assume that buprenorphine might be much better than traditional treatments, such as slow step down in the dosage or hasty discontinuation of heroin use without administering any drug. Continued study of single dose of buprenorphine administration, is highly recommended for the treatment of opioids dependency.

**Acknowledgement:** None to be declared.

**Conflict of interests:** Nil

**References:**


25. Pridmore S, Ahmadi J; Psalm 137 and Middle Cerebral Artery Infarction; ASEAN Journal of Psychiatry, 2015; 16 (2).


www.ijapsbs.com


52. Ahmadi J, Benrazavi L, Babaebeigi M, Ghanizadeh A, Ghanizadeh M,


