



A SINGLE DOSE OF 55MG OF BUPRENORPHINE FOR THE TREATMENT OF HEROIN DEPENDENCE: A NEW RESULT

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Abstract: Background: Heroin abuse is a growing problem. **Objective:** To assess the efficacy of a single dose of 55 mg of sublingual buprenorphine in the treatment of heroin dependence. **Results:** Administration of 55 mg of buprenorphine as a single dose is very helpful in the treatment of heroin dependence. **Discussion:** The present study clarifies that one dosage of 55 mg of buprenorphine is outstanding for the treatment of heroin dependence. This is a fascinating finding. **Conclusion:** We concluded that a single dose of sufficient buprenorphine could treat heroin withdrawal symptoms. This finding is a substantial addition to the literature.

Key words: Buprenorphine; Heroin withdrawals

Introduction: Food and Drug Administration (FDA) approved buprenorphine and methadone for the treatment of heroin dependency. Buprenorphine is a partial mu receptor agonist and is a safe drug such that its sublingual administration has low possibility of toxicity and overdose (1). Different investigations in the management of heroin dependence, comparing buprenorphine with methadone, illustrated that buprenorphine is more effective than methadone (2, 3, 4). In a research study, Johnson, Jaffe, and

Fudala stated that 8 mg per day of sublingual buprenorphine is comparable to 60 mg of methadone regarding retention rates and opioids negative urines (5). Detoxification of buprenorphine is easier than methadone. Oral use of buprenorphine has little absorption but when administered sublingually is well absorbed, reaching 60%–70% of the plasma concentration. Comparing to other opioids buprenorphine has less physiological dependence. It can reduce the incidence of HIV and other connected disorders following opioids consumption (1, 6, 7). Heroin is an opioid mu receptor agonist. It is prepared from morphine that was earlier considered as a non-addictive derivative form of morphine (8). Opium has been used for a long time and has a long history of medical and societal approval in several parts

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of the world, such as, North America, Europe and Asia(9, 10). Medical and psychiatric disorders are going up globally (11-29). Among mental disorders, substance connected disorders, especially opioids and stimulants induced problems have been reported as increasing globally dilemma. Now, opioids and stimulants-linked mental diseases are a progressive problem and have caused more referrals to outpatient centers, emergency wards, and psychiatric inpatients centers (30-104). At the present time we are experiencing a single dose of 55 mg of buprenorphine for the lessening and cessation of heroin withdrawal symptoms and craving. Since there are not considerable reports on this subject, therefore, our presentation may add to the literature.

We made a reliable and valid scale of measurement(32, 42) to assess the withdrawal pain and craving (based on DSM-5 criteria) for heroin withdrawal pain and craving, covering scores from 0 to 10 (0 means no pain or craving at all and 10 expressharsh pain or craving and desire all the time).

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

Patient presentment: In the current study we are going to explain a patient with heroin dependence who positively replied to a single dose of 55 mg of buprenorphine.

Our patient was a married 30 year old butcher with 3rd grade of secondary school education. He lived with his family in kavar city of Fars province in south part of Iran.

SZ began smoking opium and cannabis at age of 19. Since 5 years prior to admission he began smoking of heroin. He had few episodes of opioid induced depression in the past few years. Since 3 months prior to admission his depression became worse and developed suicidal thoughts, irritability, insomnia and aggressive behavior.

Due to depression, aggressive behavior, suicidal thoughts and agitation he was admitted in psychiatric emergency room and then was transferred to psychiatric ward.

During psychiatric interview and mental status examination he was agitated, depressed and restless. In physical and neurological

examinations there were not, any significant abnormal findings. Tests for viral markers (HIV, HCV and HB Ag) were normal. Urine drug screening test was positive for morphine only.

According to precise medical, psychiatric, and substance use history and also DSM-5 criteria, he was diagnosed as “opioid induced depressive disorder and opioid (heroin) dependent.: In hospital admission, we administered venlafaxine 225 mg, sodium valproate 800 mg, chlorpromazine 200 mg, tizanidine 8 mg and ibuprofen 1200 mg per dayfor the treatment of depression, agitation and insomnia.

On the first and second days of admission SZ complained of severe withdrawal pain and severe opioid craving, hence in the afternoon of 2nd day of admission we administered buprenorphine 55 mg as a single dose only.

Out of 10, the mean scores of heroin craving for 11days of admission were 7.5, 5.3, 0.3, 1, 1, 1.3, 0, 0, 1, 0.3, and 0 respectively.

With reference to the close monitoring, precise measurement and interview (3 times a day) for heroin withdrawal craving, SZ reported a reducing level of craving after administration of a single dose of 55 mg of sublingual buprenorphine.

Our patient was discharged without any significant heroin withdrawal symptoms after 11 days of hospital admission.

Discussion

According to the current Iranian drug program if anybody is found to be consuming illicit substances or drugs, such as, hashish, marijuana, ecstasy, methamphetamine, hallucinogens, cocaine, alcohol, opium and heroin (tobacco products are legal), they must be referred to treatment centers such as psychiatric hospitals or private clinics to be treated.

In Iran, opioids dependents are usually detoxified and treated with clonidine, methadone and sometimes with buprenorphine. This report indicates that administration of 55 mg of sublingual buprenorphine as a single dose is very effective in the treatment of heroin withdrawal symptoms. Therefore, this study could be a substantial addition to the literature.

Conclusions: We reach to this conclusion that a single dose of 55 mg of sublingual buprenorphine could successfully treat heroin withdrawal symptoms. It appears that buprenorphine is very effective in the treatment of heroin dependence. Overall, 55 mg of buprenorphine as a single dose is much better than traditional methods, such as abrupt discontinuation or stepwise reduction in the heroin dosage.

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Conflict of interests: Nil

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