

Pethidine Abuse: A Novel Finding

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Abstract

Background: Pethidine abuse is not a common problem.

Objective: The goal of this study is to explain management of pethidine withdrawal symptoms.

Results: Sublingual administration of a single high dose of buprenorphine is very useful for the treatment of pethidine withdrawal symptoms.

Discussion: This study indicates that administration of a single high dose of sublingual buprenorphine is very helpful in the treatment of pethidine withdrawal symptoms. Hence, this report could be a considerable addition to the literature.

Conclusions: It can be resulted that a single high dose of buprenorphine is very useful in the management of pethidine withdrawal symptoms. It looks that buprenorphine as a single high dose is as successful as daily low dose for a longer duration.

Keywords: Buprenorphine; Pethidine withdrawals

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Introduction

Buprenorphine is a safe drug and a partial mu receptor agonist. Its sublingual administration has low possibility of toxicity and overdose^[1,2]. Many studies, comparing buprenorphine with methadone, disclosed that buprenorphine is more effective than methadone^[3-5]. In a research study, Johnson, Jaffe, and Fudala illuminated that 8 mg of sublingual buprenorphine per day is comparable to 60 mg of methadone per day considering retention rates and opioids negative urines^[6].

Oral administration of buprenorphine has little absorption but when is used sublingually is well absorbed, reaching 60%–70% of the plasma concentration. Detoxification from buprenorphine is more comfortable than methadone. Buprenorphine in comparison to other opioids derivatives has less physiological dependency. It should be mention that buprenorphine can diminish the incidence of HIV and other associated disorders following opioids utilization^[2,7,8]. Opium has a long history of medicinal and societal acceptance in some regions of the world, such as, North America, Europe and Asia^[9,10].

Physical and psychiatric disturbances are growing globally^[11-28]. In mental problems, substance related disorders, especially opioids and stimulants connected problems have been shown as going up globally dilemma. Presently, opioids and stimulants-linked mental diseases are a developing problem and have resulted more referrals to emergency wards, psychiatric outpatient centers and inpatients centers^[29-46].

Pethidine is administered for the treatment of pain (usually for renal pain and labor pain). Pethidine abuse is not common. Some people abuse it to get high. Its withdrawal symptoms are similar to other opioids such as morphine. Presently, available treatment management plans for pethidine withdrawal symptoms are administration of narcotic medications such as buprenorphine and

methadone or non-narcotic drugs like clonidine and NSAIDS^[1].

Case Presentation

In this study we describe a patient with pethidine dependence who successfully responded to a single dose of 66 mg of buprenorphine. NA was a married 61 years old retired teacher with Bachelor of Science in educational management. He lived with his family in capital city of Yasooj in Kohkilouyeh & Bouyerahmad province in south of Iran.

He began intravenous injection of pethidine at age of 40 after an operation of disc herniation and also self-medication of his migraine headache. He step by step increased the dose of pethidine so that he had been abusing 10 ampoules (overall 1000 mg pethidine) per day since 6 months prior to admission. Since several years prior to admission he was abusing dexamethasone and chlorpheniramine ampoules on and off. He did not report smoking tobacco, opium, heroin or cannabis.

Due to pethidine abuse and depression he was admitted in psychiatric ward. In comprehensive psychiatric interview and mental status examination he was depressed and anxious. In physical and neurological examinations we could not reveal any significant abnormal findings. Urine drug screening tests were positive for morphine and benzodiazepine only. Tests for viral markers (HIV, HCV and HB Ag) were normal.

Based on comprehensive medical, psychiatric, and substance use history and also DSM-5 criteria, NA was diagnosed as "opioid induced depressive disorder and opioid (pethidine) use disorder. In hospital admission, we administered venlafaxine 225 mg per day for the treatment of depression. On the second day of admission he complained of withdrawal pain and opioid craving, so we administered buprenorphine 66 mg as a single dose only.

With reference to the close monitoring, precise measurement and interview (3 times a day) for pethidine withdrawal pain and craving, he reported a diminishing level of withdrawal symptoms and craving after administration of a single dose of 66 mg of sublingual buprenorphine. Our patient was discharged without any pethidine withdrawal symptoms after 10 days of hospital admission.

Discussion

We commonly treat opioids (including pethidine) dependent patient with clonidine, methadone or buprenorphine in Iran. With reference to the current Iranian drug policy if somebody is found to be abusing illicit substances or illegal drugs (excluding tobacco products), such as, benzodiazepines, opioids, cannabis, ecstasy, methamphetamine, hallucinogens, cocaine or alcohol, they must be referred to the addiction treatment centers or psychiatric hospitals or private clinics to be treated.

Our report shows that administration of 66 mg of sublingual buprenorphine as a single dose is very useful in the treatment of pethidine withdrawal symptoms. We should mention that our patient did not benefit from venlafaxine but improved with buprenorphine, because venlafaxine administration requires at least two weeks to be effective but buprenorphine administration needs only a few hours to apply its effects. Hence, this report could be a considerable addition to the literature.

Limitations of the study

In this work we reported a patient with abuse of pethidine who replied to a single high dose of buprenorphine. So we cannot generalize the result to all cases with pethidine. We require multicenter clinical trials to be able to generalize the findings.

Conclusions

It can be concluded that a single dose of 66 mg of sublingual buprenorphine is useful in the management of pethidine withdrawal symptoms. For the treatment of pethidine withdrawal symptoms, it seems that buprenorphine as a single high dose is as effective as daily low dose for a longer duration.

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Conflict of interests: Nil

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