Heroin Dependency Treatment: A New Approach

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Abstract
Background: Heroin dependency is a globally problem.
Objective: To explain the efficacy of low dose of clonidine, tizanidine and ibuprofen (NSAID) in the treatment of heroin dependency.
Method: To evaluate a single case
Results: Combination of clonidine 0.4 mg, tizanidine 8 mg and ibuprofen 800 mg per day is very effective in the management of heroin withdrawal symptoms and craving.
Discussion: Our findings indicate that low dose of clonidine, tizanidine and ibuprofen (NSAID) is beneficial in the treatment of heroin dependency. This is a positive result.
Conclusion: To the author’s knowledge positive effects of combination of clonidine, tizanidine and ibuprofen in these situations have not been published yet, and this finding is an important addition to the literature.

Keywords: Heroin; Withdrawal; Clonidine; Tizanidine; NSAID

Introduction
Heroin is a derivative of morphine that was originally introduced as a non addictive derivative of morphine. Heroin is an opioid mu receptor agonist[1]. Opium has been used for many centuries and has a long history of medical and social acceptance in some parts of the world, not only in the opium-producing countries of Asia such as Afghanistan, but also during the 19th and very early 20th centuries, in North America and Europe[2,3].

Mental disorders are globally growing[4-23]. In psychiatric disorders, substance related disorders, especially opioids and stimulants induced disorders have been considered as progressive worldwide problems. Nowadays, stimulants abuse and stimulants-induced psychiatric disturbances are a growing problem has produced more presentations to outpatient clinics, emergency departments, and inpatient psychiatric units[24-67]. The FDA (Food and Drug Administration) approved use of clonidine for the treatment of hypertension, tizanidine for the treatment of spasticity, and nonsteroidal anti-inflammatory drugs (NSAIDS) for the reduction of pain, inflammation, and fever[1].

At the present case report we are using combination of tizanidine, clonidine and ibuprofen (NSAID) as a new approach for the treatment of severe heroin withdrawal symptoms and craving. We ourselves prepared a reliable and valid scale[24-26] to evaluate the withdrawal craving based on DSM-5 criteria for heroin craving, ranging from 0 to 10 (0 means no craving at all and 10 means severe craving and temptation all the time).

Craving scale: 0-1-2-3-4-5-6-7-8-9-10.

To the authors’ understanding and knowledge we could not find enough controlled published trials on this matter? So, study of this case could represent a new finding.

Case Presentation
We describe a patient with heroin dependency who dramatically responded to combination of clonidine, tizanidine and ibuprofen (NSAID).
AZ was a single, 18 year old barber with grade 3 of middle school education. He lived with his parents in Shiraz city of Fars province in south of Iran. AZ began frequent use of opioid and tramadol at age of 13. After several months he began smoking of marijuana and methamphetamine (Meth) as well. Since one month Prior to Admission (PTA) he began smoking heroin.

Because of agitation and depression, he was admitted in psychiatric emergency room. Urine drug screening tests were positive for morphine, methadone, cannabis and benzodiazepine. During admission he received olanzapine 10 mg, sodium valproate 600 mg and chlorpromazine 50 mg per day for the treatment of depression and insomnia. After 3 days he was transferred to Dual Diagnosis Ward. In psychiatric interview and examinations he was depressed, restless and agitated. In exact physical and neurological examinations we could not find any abnormal findings. Serology for viral markers (HIV, HCV and HB Ag) was normal.

According to DSM-5 criteria, and also complete medical, psychiatric, and substance use history AZ was diagnosed as “opioid (heroin) dependent and opioid induced mood disorder” AZ received clonidine 0.4 mg, tizanidine 8 mg and ibuprofen 800 mg per day for the treatment of heroin withdrawals. He reported symptoms of opioid withdrawal especially pain and craving when he was admitted in emergency room. The mean scores of heroin craving for 4 days of admission in emergency room was 6 out of 10 and for 7 days of Dual Diagnosis Ward (after taking clonidine, tizanidine and ibuprofen) was 1.5.

Based on the interview and closely monitoring (3 times a day) for heroin, he experienced much more heroin withdrawal craving before taking medications (Mean: 6) than after taking medication (Mean: 1.5). One day before leaving hospital, urinary drug screening tests were negative for morphine, methadone, cannabis and benzodiazepine. He was improved and discharged without any heroin withdrawal symptoms after 7 days of admission in Dual Diagnosis Ward. Patient was especially monitored and interviewed (by a nurse who did not know the patient’s medical history) only for heroin withdrawals and craving, 3 times a day (morning, afternoon, evening).

AZ was taking medications and his condition was improving every day.

Based on the interview and closely monitoring (3 times a day), he experienced much more heroin withdrawals and craving before taking medication than after taking medication.

Discussion

It should be emphasized that clonidine is an alpha 2 receptor agonist and a sympatholytic drug, so decreases heroin withdrawal symptoms such as lacrimation, rhinorrhea, diarrhea, abdominal cramp and hypertension. Tizanidine decreases muscle spasm induced by withdrawal of heroin. Ibuprofen decreases heroin withdrawal pain. Our study elucidates that clonidine 0.4, tizanidine 8 mg and ibuprofen 800 mg per day is very useful in the reduction and cessation of heroin withdrawal and craving. Therefore this case study is an important addition to the literature.

Conclusions

Low doses of tizanidine, clonidine, and ibuprofen are very effective in the management of opioids withdrawal symptoms. This is a significant finding.

Acknowledgement: We were financially on our own.

Conflict of interests: None to be declared.

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