

High Dose of Buprenorphine in the Treatment of Refractory Major depression with Severe Suicidal Tendencies

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Abstract

Background: Administration of high dose buprenorphine is associated with rapid-acting anti-depressive and ant-suicidal effects.

Objective: To examine the effect of high dose buprenorphine on the refractory major depression with severe suicidal tendencies.

Method: In the current study we tested the competency of buprenorphine for the treatment of depression and suicide.

Results: High dose buprenorphine was resulted to fast treatment of refractory depression and suicide. Moreover, promotion in psychoactivity, high demotion in depression, regulation of emotion and mood, were observed following buprenorphine administration. Buprenorphine was well tolerated as well.

Discussion: Our results illuminated that buprenorphine has rapid and sustained antidepressive potentials. These findings should be replicated in randomized, placebo-controlled, double-blind trials.

Conclusion: This report indicated that a single high dose of buprenorphine appears to be clinically effective and safe. Our study advises that a single high dose buprenorphine can provide a speedy, simple and safe means of treatment of depression and suicide. Usage of a single high dose of buprenorphine appears to concerns about compliance, and also to diminish the chance of buprenorphine being diverted for abuse.

As yet fast-acting and sustained antidepressive effects of a high dose of buprenorphine have not been printed, hence this result could be a significant addition to the literature.

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Introduction

Substance dependents have high ranks of depression and suicide^[1-3], minor psychopathology^[4,5] and personality disorders^[6,7]. Research evidences indicate that primary psychiatric symptomatology can predict failure or success in detoxification treatment of opioid dependent outpatients^[8]. Associated psychiatric diseases especially mood disorders could intervene with the direction and course of substance dependence. Moreover, research clues also showed that opioid dependents coexisted with a depressed mood at the beginning of treatment may be less likely to be clean at follow-up than other opioid dependents with a normal mood^[9].

Substances such as Ayahuasca can demote the level of depression and promote the mood. A single dose of Ayahuasca lower the rate of depression very quick. Ayahuasca is an Amazonian botanic hallucinogenic cook. It comprises harmine, a monoamine-oxidase A inhibitor and dimethyltryptamine, a 5-HT_{2A} receptor agonist^[10,11].

Buprenorphine can lower the level of depression and suicidal tendencies very fast^[12,13]. Buprenorphine is not designed, nor approved by FDA, to manage depression. The studies necessary to verify that it is influential have not been completed yet. We should have in mind that buprenorphine is potentially addicting itself. Hence it should not be ordinarily used for this aim. More investigations and clinical trials are necessary to examine



this area. We expect that researchers will discover the foundation for improvement of depression and anxiety in patients with opioids dependence^[12-14].

Mental health diseases have been advancing problems worldwide^[12-18]. Inside psychiatric problems, substance induced disorders primarily, depressive disorders have been reflected as promoting global problems and currently, substance induced psychiatric presentations to outpatient centers and hospitals are progressing problems^[19-48].

Buprenorphine is commonly administered to improve pain and opioids withdrawal symptoms^[13].

We are now administering buprenorphine as a new application for the improvement of refractory major depression with severe suicidal tendencies, because we theorize that (our rationale) biochemistry underlies in opioid dependency is primarily like to that of depression, in both groups the level of catecholamines, endorphins and enkephalins has been decreased^[12,13].

To our knowledge and understanding we could not provide controlled published data on this matter (buprenorphine for the improvement of refractory major depression with severe suicidal tendencies). Therefore, our report could manifest a new conclusion.

Patient picture

AF was a single, 42 years old unemployed university graduated man who inhabited with his parent in the town of Fasa of Fars province in south Iran. He began smoking cigarettes and opium since 15 years prior to the present admission (PTA). Moreover, he has been an occasional abuser of methamphetamine and benzodiazepines.

AF gradually developed anxiety, negative thoughts, depression, suicidal thoughts, hopelessness, insomnia, and social isolation. Since one month PTA his symptoms were exaggerated. He gave history of several suicidal commits with hanging and knife and the latest was two months ago.

During comprehensive psychiatric interview and full examinations AF was severely depressed, seriously suicidal, hopeless, helpless, hypoactive and hypo-talkative. In detailed physical and neurological examinations there were several acute signs of cutting and piercing on his body especially on his neck. Laboratory tests of serology for HIV and hepatitis were within normal limit. Urine drug screening test (Thin layer chromatography) was positive for morphine.

Based on DSM-5 criteria, and complete medical, psychiatric, and substance use history he was diagnosed as "Major Depressive Disorder". We administered venlafaxine 225 mg and olanzapine 30 mg per day to treat depression, suicidal tendencies, anxiety and insomnia.

On the 4th day of admission, due to severity of depression and suicidal ideas, we started double Electro Convulsive Therapy (ECT) every other day. Double ECT means two sessions of ECTs at the same session of anesthesia.

After four sessions of ECTs (two double ECTs), no significant change was observed in the patient's condition.

On the 7th day of admission, due to emergency situation of the patient, we administered only a single dose of 32 mg sublingual buprenorphine to promote his mood. AF was precisely monitored and interviewed for the level and severity of depression and suicidal thoughts. Before receiving buprenorphine he reported major depressive disorder, severe type and serious sui-

cidal thoughts. One hour after taking 32 mg buprenorphine his suicidal thoughts disappeared and he reported his depression as very mild.

On the 8th and 9th days of admission, he was well but on the 10th day of admission he reported depression, mild to moderate type without any suicidal thoughts. Therefore, we administered only a single high dose of 128 mg sublingual buprenorphine.

A couple of hours after taking 128 mg buprenorphine his depression (mild to moderate type) disappeared. On the 11th to 28th days of admission, he did not report any suicidal thoughts or significant level of depressive symptoms.

Although after receiving 128 mg buprenorphine AF did not report any suicidal thoughts or significant level of depressive symptoms, but we continued administration of ECT to complete treatment of patient's major depressive disorder, severe type. After 28 days of hospital admission, AF was discharged without depression, suicidal thoughts or any opioid withdrawal symptoms.

Following hospital discharge of the patient, we have already followed him up for five weeks, his condition is still well.

Discussion

Although AF was on olanzapine, venlafaxine, and ECT, however, our work shows that two high doses of buprenorphine (32 and 128 mg) had a rapid and sustained effect on reduction and cessation of suicidal ideas and depression. Buprenorphine administration in these serious situations has not been recommended earlier and our study is a significant addition to the literature.

Our study described that a single high dose of buprenorphine appears to be clinically safe, and effective. This work recommends that a single high dose buprenorphine can supply a speedy, simple, and safe means of treatment of suicide and depression. Administration of a single high dose of buprenorphine looks to diminish concerns about compliance, as well as to decrease the probability of buprenorphine being diverted for abuse. Furthermore, the cost considerations looks to be suitable, especially when we study the possibility of administration for outpatients without a need for hospital admission. Imbalance of dependence, it is difficult to conclude that craving reduction was only due to buprenorphine.

Conclusions

It can be concluded that a high dose of buprenorphine has fast and energetic effect on these serious and emergency situations. This could be a novel detection.

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Conflict of interests: None to be declared.

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