

Opioid Substitution Treatment Using Buprenorphine for Management of Dependence on Natural Opioids: Case Series

Dear Sir,

Opioids are a group of psychoactive substances that are similar in action to that of opium poppy and include natural, semi-synthetic, and synthetic opioids. Buprenorphine maintenance as a treatment option for opioid-dependent subjects is well established.^[1,2] However, the evidence is largely from studies on heroin or prescription opioid users. In India, even though a substantial proportion of opioid-dependent individuals use raw opium (*afeem*) or poppy husk (*doda*), evidence regarding treatment options for them is scanty. Opium users have longer durations of use and lesser severity of dependence than opioid-dependent individuals.^[3] A recent Cochrane review found inconclusive evidence for opioid substitution treatment (OST) among opium-dependent patients.^[4] Indian Psychiatric Society's treatment guidelines, however, do not distinguish between treatment agents with respect to the type of opioid the patient is dependent upon.^[5] We present a series of three cases of natural opioid dependence that were managed with buprenorphine maintenance.

The first case is a 54-year-old married male, educated up to 12th standard, with history of tobacco use since 15 years of age, characterized by craving, tolerance, and withdrawal. He had consumed alcohol since 21 years of age, characterized by craving, tolerance, and withdrawal, but has been abstaining from alcohol after 1 year of its daily use at 22 years of age. He has been using *doda* since 23 years of age. At 23 years, he had tried one tablespoon of *doda* for abdominal pain, liked its euphoric effects, and started daily use. He developed craving and tolerance to *doda* within 2 years and increased the dose to 250 g daily within 5 years. On days when *doda* was unavailable, he could not work due to withdrawals, leading to lesser contribution to family expenses. Following familial conflicts, he tried multiple times to quit *doda* but failed. He also restarted his daily alcohol use (180 mL whisky). At 42 years, he presented to our center (in 2005), with a desire to quit *doda* predominantly. He had not taken any treatment previously. He was diagnosed to have opioid dependence, tobacco dependence,

and alcohol dependence. Mental status examination revealed good motivation. He was prescribed cap. dextropropoxyphene 650 mg, with a plan to taper and stop it in view of first treatment seeking attempt and good psychosocial support, and tab. diazepam 20 mg in tapering doses to manage alcohol withdrawal. The patient had quit alcohol for 8 months, after which he started monthly use of alcohol, which continues till date. He also abstained from *doda*, but any attempt to taper dextropropoxyphene resulted in withdrawals and relapse to use of *doda*. Inpatient detoxification was attempted in 2007 when his abdominal pain increased and he was diagnosed with intestinal tuberculosis. Antitubercular treatment (ATT) was initiated and the treatment plan changed to buprenorphine maintenance in view of medical comorbidity, increase in pain on detoxification, and patient's preference. He was stabilized on daily observed sublingual buprenorphine 10 mg and shifted to buprenorphine-naloxone in 2009 (as weekly "take-home"). The patient completed ATT and is also compliant to OST till date, with repeated urine screens negative for illicit opioids. He also reports no craving for illicit opioids after the start of OST. His quality of life also improved, with a regular job, financial stability, and improved familial relations. He believes that to maintain these gains, the agonist treatment must continue.

The second case is a 45-year-old married male, educated up to 12th standard, an electrician by occupation, who presented to our center in 2008 at 35 years of age with chief complaints of *doda* use for 10 years characterized by tolerance, craving, and withdrawals. Despite social derision, familial conflicts and financial drain, he could not abstain, even when he tried to, on his own. He had good motivation to quit at the time of presentation. He was diagnosed to have opioid dependence. In view of his unstable job at the time of presentation, long duration of opioid use, and poor psychosocial support, plan for agonist maintenance was made. He was initiated on daily supervised sublingual buprenorphine in 2008, stabilized on 14 mg, and shifted to buprenorphine-naloxone (weekly take home) within a few months, which continues till date. After stabilization of

buprenorphine dose, he reports no craving for *doda* and is abstinent from *doda* till date, corroborated by repeated negative urine screen. He is working regularly, and his familial relations have also improved.

The third case is a 53-year-old married male, educated up to 8th standard, who presented to our center in 2007 when he was 42 years of age, with history of nicotine use in the form of beedi since 12 years of age, characterized by craving, tolerance, and withdrawal. He had history of opioid use since 16 years of age. He had initiated oral *afeem* use with 1 g daily for enjoyment, which progressed gradually to 25 g daily within 7 years due to tolerance. He also experienced a craving to take *afeem*. However, due to cost constraints, he shifted to *doda*. His job suffered on days when he could not take *afeem* or *doda* due to withdrawals. To sustain his *afeem/doda* use, he started to sell household things, leading to familial conflicts. He was diagnosed to have opioid dependence syndrome and nicotine dependence syndrome and was prescribed cap. dextropropoxyphene 390 mg/day with a plan to taper and stop it in view of logistic reasons and patient's preference. The patient abstained from *doda* but could not taper dextropropoxyphene because of withdrawal symptoms. After discussion with the patient, the treatment plan was changed to agonist maintenance and he was started on tab. buprenorphine–naloxone (2 mg/0.5 mg combination). The dose of agonist was stabilized to 10 mg of tab. buprenorphine (combined with a total of 2.5 mg naloxone in the combination tablets). After the start of agonist maintenance, he reported no craving for *doda* or *afeem* and is abstinent for illicit opioids. The patient is still on regular follow-up, with repeated urine screens negative for illicit opioids. He also started working as a security guard regularly, is stable financially, and enjoys good relations with his family.

Two broad approaches of opioid dependence management are (a) withdrawal management or detoxification (followed by “drug-free” or antagonist maintenance) and (b) agonist maintenance. In our patients, attempts at detoxification were unsuccessful. Also, they had a long history of opioid dependence, high habit size, and socio-occupational complications. Once put on OST with buprenorphine, all displayed psychosocial improvement, treatment retention, and maintained abstinence. This suggests that OST with buprenorphine is an effective approach for patients(a) with dependence on low-potency, natural opioids (raw opium or poppy husk) and (b) for whom detoxification has not worked for some reason.

The most interesting part of our cases is the long duration of follow-up, retention, and abstinence. Most prospective studies of OST have a follow-up

of 1–6 years, with very few studies on methadone having a follow-up of 11–13 years.^[6] In our patients, buprenorphine maintenance has been continued (and still ongoing) for longer durations (about 10 years in two cases and 5 years in one case).

In general, because natural opioid use is rarer in the developed world (from where most research is published), there is limited literature on treatment of dependence to natural opium. However, the available literature, largely from Asia, points toward effectiveness of OST – buprenorphine^[7] and methadone^[8,9] – with better retention for higher doses.^[7,10]

Indian guidelines and recommendations should be based on Indian realities, experiences, and evidence, and not based only on western literature. As of now, there are no well-designed Indian studies testing OST's efficacy among natural opium users. However, as can be seen from this case series, all our patients had an improvement in various aspects of their life with OST.

This case series, thus, suggests that buprenorphine maintenance may be a viable treatment option for opium-dependent patients. Those with long-term opium use and unsuccessful detoxification attempts may be more suitable candidates for OST. Optimum medication doses can stave off illicit opium use and help in a better outcome. For more conclusive evidence, we recommend methodologically robust, prospective studies in this population.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

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Conflicts of interest

There are no conflicts of interest.

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