Illicit and over-the-counter codeine dependence after acute back pain—successful treatment and ongoing recovery after buprenorphine/naloxone taper

Joseph Kean

The Bridge Project, Bradford, UK, EU

Summary

Background: Increased prescribing of opioids for pain has been associated with an increase in dependency and associated morbidity and mortality. There are no evidence-based guidelines to direct the treatment of prescription or over-the-counter codeine dependency, including the use of maintenance and tapered dosing, or its use in conjunction with psychosocial interventions (PSI). Case presentation: A family man developed opioid analgesic dependence after prescription of opioid analgesics for acute back pain. After his repeat prescription was stopped, he sourced both illicit and over-the-counter codeine. After 4 years of escalating use to a daily codeine dose of 1250 mg, he presented to a substance misuse service (The Bridge Project, Bradford). After successful induction and stabilisation on buprenorphine/naloxone (8 mg/2 mg) over the course of one week, our client successfully tapered over a 4-month period and remained in work during treatment. The patient experienced depressive ideation and subsequently a formal diagnosis of depressive illness with associated anxiety was made. Comorbid depression is a frequent association with addiction with opioid receptors thought to be an important component of the reward dysfunction that characterises these psychiatric disorders. Conclusion: Opioid substitution treatment—buprenorphine/naloxone within a holistic Change Programme that included structured behavioural change psychosocial interventions—was successful, supporting slow taper across a 4-month period conducted within Unity Recovery Centre, part of the Bridge Project.

Key Words: Opioid analgesic dependence; codeine; buprenorphine/naloxone; opioid substitution treatment; taper

1. Background

Increasingly, opioid analgesic dependence is recognised as an important medical and societal problem. In the United States, the marked increase in the availability of prescription opioid analgesics has been linked to a parallel increase in the rate of death from overdoses of prescription opioids [3]. In the UK, there has been a gradual increase in opioid analgesic-related deaths [7, 11]. Marked increases in deaths from tramadol overdose in the last 3 years (154 in 2011 rising to 220 in 2013 in the UK) raised a flag and contributed to the decision to include tramadol in the Schedule III of the Misuse of Drugs Regulations in June 2014 [11, 12]. Deaths from prescription analgesics in England and Wales now appear to exceed those of heroin [11] and regional data has highlighted the mortality associated with codeine overdose in Scotland [9].

Although anecdotal, case reports have highlighted the ongoing problem of opioid analgesic dependency linked to prescribed opioids [8, 1]. The problem of opioid analgesic dependence is not limited to strong opioids and extends beyond prescription-only medicines (POMs) to common over-the-counter (OTC) analgesics [2]. Codeine remains the most commonly prescribed analgesic and is available as a POM and as part of lower strength OTC products in combination with paracetamol, ibuprofen, or aspirin. Recent case series have highlighted the dependence, morbidity and potentially fatal outcomes associated with the misuse of codeine-containing combination OTC painkillers.
Despite awareness of the problem of addiction to medicines and the specific problem with opioid analgesics, it is difficult to accurately quantify the prevalence of opioid analgesic dependence in the UK, and there are limited descriptions of individuals affected, including details of their dependency and their treatment. UK guidelines on the clinical management of drug dependence suggest that patients presenting with dependence on codeine preparations benefit from buprenorphine rather than methadone [4], but there are no evidence-based guidelines to direct the treatment of POM or OTC codeine dependency, including the use of maintenance and tapered dosing, or its use in conjunction with psychosocial interventions (PSI). It is accepted that not all presenting cases will require substitute prescribing and a significant proportion have been successfully treated with reduction plans in conjunction with structured PSI.

We describe a case — a family man originally prescribed codeine for an acute back injury who developed codeine dependence — to highlight that routine codeine prescribing for acute pain can result in dependency and to describe his agonist opioid treatment (AOT) and ongoing recovery after dose taper within a holistic Change Programme delivered by a substance misuse service in Bradford, UK.

2. Case presentation

2.1. Codeine dependency

A married, successful business man in his mid-30’s presented to his GP with acute, moderately severe non-specific low back pain in 2010. He was otherwise well with no previous serious illness or surgery. He had a 15 pack-year smoking history and seldom drank alcohol. The patient had no history of mental illness but reported stress related to a hectic work schedule; he also had five children. After initial non-steroidal anti-inflammatory drugs and paracetamol, he was prescribed codeine (60 mg four times daily) for analgesia on repeat prescription. After several months and the resolution of his back pain, his repeat prescription ended, but the patient described regularly using OTC co-codamol. Over the last 2 years up to the end of 2014, his use of codeine had increased to overcome unpleasant feelings that occurred without use. He had headaches that he described as migraines and was ‘feeling ill’ and these feelings resolved when he consumed codeine. He purchased escalating amounts of illicit codeine phosphate (60 mg) from a street dealer to supplement OTC co-codamol and co-codamol occasionally obtained on prescription. Over this 2-year period, his codeine use escalated to an average of approximately 1250 mg/day. His partner was aware of his codeine use and encouraged him to stop, but his attempts at reducing his codeine use or abstaining resulted in withdrawal symptoms including lethargy, low mood, abdominal pain, and cramps. He was also concerned about acute health problems, as friends had told him that stopping codeine suddenly could result in heart failure.

The patient was very busy in work, was under considerable stress, and struggled to maintain a good work/life balance. He initially did not want to think of himself as having a drug habit and was therefore reluctant to seek help. Ultimately the patient realised that he was dependent on codeine and wanted to stop using but had been unaware that there was a treatment service available for people with opioid analgesic dependence. In November, he presented to Bridge, a Bradford-based (UK) drug treatment charity, after hearing about our service from a family member. He was told immediately of the risks of consuming large quantities of paracetamol-containing preparations, told to avoid co-codamol, and scheduled for screening and assessment.

2.2. Assessment and treatment

Within a few days, he was assessed by a GP with Special Interest (GPwSI) in addiction, and was found to be displaying typical opioid withdrawal. Liver function tests revealed abnormal albumin levels and elevated alanine transaminase. The patient described recent weight loss and bouts of constipation. Drug testing was positive for the necessary metabolites and he was accepted into The Change Programme at Bridge for treatment.

In mid-November on the first day of agonist opioid treatment, the patient had been abstinent from codeine and when signs of withdrawal became marked, buprenorphine/naloxone was initiated at a dose of 4 mg/1 mg, followed soon after by a further dose of 2 mg/0.5 mg. Following treatment induction on day one, the patient was observed and stabilised on a maintenance dose of 8 mg/2 mg given under supervision during the first week. After satisfactory stabilisation, he was given a weekly prescription with no supervision requirements and entered onto a structured dose taper plan.

The Change Programme is based on a 12-session model. It should be noted however that 12 sessions do not necessarily reflect the time in weeks and
the programme acknowledges that codeine-dependent clients may need to remain longer in the Programme; in this case, this was for approximately 4 months. The Programme is based on a behavioural change model but also includes Social Behaviour and Network Therapy (SBNT) and Cognitive Behavioural Therapy (CBT) as appropriate to give positive social support for change. At initiation, the patient described how he felt driven to take on challenges to prove himself, but was unable to articulate to whom and for what reason. He expressed a desire to reduce his workload and find time for activities outside of his businesses.

In the following month, he missed some appointments with the GP and Recovery Practitioner, but reported being more clear-headed. He had self-reduced his dose to 6 mg/1.5 mg buprenorphine/naloxone and agreed to reduce his dose further to 4 mg/1 mg in mid-December. Soon after, he reported feeling fatigued and found that his sleep pattern had changed and he was sleeping for longer. In January, the patient was feeling settled and discussed joining a fitness centre to begin to exercise. He reported an improvement in his family relationships, and had found the latest dose reduction to 2 mg/1 mg easier than the previous reduction.

At a scheduled appointment in mid-February, he was stable on 1.6 mg buprenorphine but was experiencing depressive thoughts and symptoms of anhedonia, which he discussed openly with his GP and others in his support group. He was sleeping excessively, with poor motivation and concentration. In late February, he tapered to 1.2 mg but reported feeling particularly anxious and continued to experience depressive ideation. In March 2015, the patient had tapered his dose to 0.8 mg buprenorphine. Given his ongoing symptoms of depression with associated anxiety, he commenced fluoxetine 20 mg once daily. The patient completed the taper from buprenorphine and is currently (May 2015) opioid abstinence.

3. Discussion

Increasingly, people are seeking help for opioid analgesic dependency in the UK [13]. Case reports and case series have described opioid dependency to both POM and OTC preparations and have highlighted the limited evidence base to guide optimal agonist opioid treatment in this group of dependent patients [8, 1, 2, 6]. We chose to initiate treatment with buprenorphine/naloxone for our patient, who was using a combination of POM and OTC codeine over a 4-year period. This was in line with a new and evolving AOT protocol for opioid analgesic dependent patients and reflects the broader view that buprenorphine/naloxone is the preferred AOT over methadone in cases of codeine dependence for those that require prescribing [13]. Methadone use is highly stigmatised by its association with illicit heroin use and our client (and others with similar presentations) do not identify with this group. Initiating agonist opioid treatment with methadone and titrating to a maintenance dose would have taken several weeks with methadone, and methadone carries a higher risk of overdose and other side effects such as QT prolongation. Clients can find it difficult to continue working while taking methadone [8, 1] and for this group who have a different profile, including better occupational and social functioning than heroin-dependent clients [5], buprenorphine/naloxone is better suited. For those wishing to enter treatment with a set timeframe for taper, buprenorphine/naloxone with its more flexible dosing and reduced physical dependence compared with methadone is preferred. Our client had made a number of attempts to taper and stop his codeine misuse previously without success, and given his strongly stated intention to recover, he was deemed suitable for our programme.

He was stabilised on a relatively low dose of buprenorphine/naloxone (8 mg/2 mg) and was able to successfully taper according to a schedule agreed between him and his prescriber, slowly over a 4-month period, in conjunction with PSI. He had regular access to a multidisciplinary team that included his GPwSI, his key worker and those involved with his psychosocial care, which we regard as an essential component of the recovery journey. He was able to continue working throughout the treatment period and his family relationships strengthened and improved.

The patient experienced depressive ideation and subsequently a formal diagnosis of depressive illness with associated anxiety was made. Comorbid depression is a frequent association with addiction with opioid receptors thought to be an important component of the reward dysfunction that characterises these psychiatric disorders [14]. In particular, recent research has focused on the role of the kappa opioid receptor (KOR) and its role in depressive behaviour during abstinence from misused opioids [10]. Buprenorphine acts as an antagonist of the KOR points and it is conceivable that the taper from buprenorphine was associated with altered KOR signalling with negative effects on the reward pathways and the emergence of the depressive state. Clearly, in this case, close follow-up will be important to moni-
tor and manage the risk of relapse to opioid analgesic dependency and ensure that the interrelated psychopathologies of dependency and depression are optimally managed.

4. Conclusions

This case study highlights that a patient once outside the care of his GP after treatment for acute pain can maintain dependency on opioid analgesics sourced OTC and from illicit street dealers. Evidence-based guidelines to better direct the care of such a patient are lacking. AOT, in this case buprenorphine/naloxone, within a holistic Change Programme that included structured behavioural change PSI was successful in treating opioid analgesic dependence, but comorbid depression was diagnosed at the end of the taper. The treatment and slow buprenorphine taper across a 4-month period was conducted within a charity-based treatment centre and with the client under the care of a GPwSI. Treatment, in our experience, should include all these elements and where appropriate, the client’s GP, who may maintain control of the prescription with guidance from the GPwSI and support from the practitioners within the programme.

References


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Conflict of interest

Author declared no conflict of interest for this Case Report.

Ethics

Authors confirm that the submitted study was conducted according to the WMA Declaration of Helsinki - Ethical Principles for Medical Research Involving Human Subjects. The study does not have IRB review/approval; this study does not require ethics committee approval because ‘Case reports’ does not require ethics committee approval but informed consent signed by patients. This single case study is anonymized. The manuscript is written with few personal details and it would not be possible to identify the person. The person has given consent for their case history inclusion in this manuscript.

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