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Case Report

The Case for Continued Buprenorphine Utilization in High-Risk Adolescent Patients with Opioid Use Disorder

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Abstract

We describe a case of a 17 year old male with Opioid Use Disorder (OUD) and comorbid mental health diagnoses including Generalized Anxiety Disorder and Oppositional Defiant Disorder. He has a history of multiple incarcerations. He was initiated on buprenorphine sublingual (SL) form almost a year ago and then subsequently relapsed to opioid use several times. Abrupt cessation of medication assisted treatment (MAT) occurred during an incarceration followed by immediate relapse upon release from jail three months later. The patient was then restarted on buprenorphine-naloxone sublingual form with plan to administer subcutaneous depot form of buprenorphine (also known as Sublocade). The SQ buprenorphine was never initiated due to denial of the injectable based off age criteria.

Our case presents the barriers to medication assisted treatment in a high risk population of adolescents and young adults who are at risk of treatment dropout. Continued MAT could be lifesaving in this high risk group.

Keywords: Buprenorphine; Sublocade; Medication for Opioid Use Disorder (MOUD); Extended release; Subcutaneous depot; Adolescents; Opioid use disorder

Introduction

The prevalence of opioid abuse, opioid use disorder, and harmful outcomes related to opioid abuse continue to rise among adolescents and young adults aged 15-25. While treatment trends in adolescents tends to favor abstinence based treatment or outpatient psychosocial therapy, medication assisted treatment can be an essential component of treatment of OUD in adolescents and young adults [1,2].

Buprenorphine has emerged as one of the most utilized medications for medical treatment of opioid use disorder (OUD) [1,3]. Buprenorphine is a partial μ-opioid agonist used for maintenance treatment of opioid use disorder currently approved by the FDA for use in individuals 16 years and older. Additionally, it has been shown that sustained, long term treatment for OUD is the most effective practice in preventing relapse [4]. Literature suggests incarceration being negatively linked with prolonged abstinence, as the access to medication assisted treatment can be a rate limiting step to treatment [5,6]. Finally, while buprenorphine films and tablets (Suboxone) are approved for the utilization in adolescent populations, long term subcutaneous depot formulations such as Sublocade are only approved for 18 years and older.

The following case report will demonstrate situations that may warrant Sublocade initiation in the adolescent population to increase treatment retention and subsequent abstinence in high risk adolescent populations.

Case Report

A 17 year old male patient with a history significant for oppositional defiant disorder, generalized anxiety disorder with panic attacks, and significant opioid use disorder and cannabis abuse disorder was seen in clinic for buprenorphine follow up. Patient has been incarcerated in juvenile detention centers on five different occasions with charges stemming from theft, gun possession, and evading police. He was previously known as a member of a crime group, prompting him to take online classes while on probation to avoid interactions.

His opioid use began August 2021 with the use of two 30 mg Percocet twice weekly, incidentally discovered while presenting to the ED for numbness and tingling in his arms and legs. Patient also reports smoking a joint of marijuana a day at this time. He says that use of marijuana and opioids

have helped relieve his anxiety. He was seen in outpatient addiction clinic for follow up on his opioid use disorder. He reported that he was using Percocet from a friend, as well as pills illicitly that were known to the patient to contain fentanyl. The patient and his guardian were advised on the risks of fentanyl and opioid use and medications options were discussed. He was interested in Suboxone and was started on 2-0.5 mg films twice a day.

Following initiation of 2-0.5 mg twice a day buprenorphine-naloxone films, patient was seen for follow up. He reported that he would often only take one film per day but reported no cravings or withdrawal symptoms at either appointment. Medication was changed to 2-0.5 mg films one per day at this appointment.

The patient was next seen for follow up a month later, which showed that urinalysis from the month prior, was positive for fentanyl. Patient and guardian were provided significant information on the dangers of this drugs use at this time. Again, patient reported no withdrawal symptoms or cravings, attributing his previous positive urine drug screen as being post-celebration. He was again provided information on the harms of continued marijuana use on his developing brain, for which he explained that it was beneficial in treating his anxiety and panic attacks. Patient was again continued with 2-0.5 mg once per day buprenorphine-naloxone and advised to follow up with primary care for ADHD and anxiety workup and treatment.

The next patient interaction was relatively uneventful as he reported continued daily use of his films. He endorsed no cravings or withdrawal symptoms at this time, with no use since November. Additionally, he states that he feels tired, unmotivated, and fatigued without his buprenorphine-naloxone films, which has motivated his adherence. His prescription was refilled at once per day dosing.

The next time our patient was seen was at follow up six months later. Since last time he had been seen, he had been arrested and spent three months in a juvenile correction facility where he was unable to receive his MAT. The patient had difficulties with sleep and anxiety but was otherwise asymptomatic. Following his release from jail, the patient relapsed on fentanyl, reportedly taking three M30 pills per day for a few days. Following relapse, he decided to quit and reinitiate buprenorphine, for which his earlier prescription was still nearly full. A severe precipitated withdrawal occurred for the patient, prompting him to check into rehab, where they oversaw buprenorphine administration.

His last presentation to clinic for reevaluation and refill was one day after his supply ran out. He denied any cravings or withdrawal symptoms. With patient's use history and fentanyl use, increasing dosage to 6 mg per day with subsequent switch to Sublocade injections was discussed with patient and guardian. Ultimately, the injections were not approved by his insurance (Table 1).

Discussion

Prescription opioid and heroin use is most prevalent in the age 18 to 25 demographic. Early use has been observed, with a growing number of individuals are initiating their substance use between the ages of 12 and 17 [7]. Data for 2020 reveals that nearly 1.2 million individuals ages 12 and older initiated prescription pain reliever misuse, with another 103,000 initiating heroin use [7]. A 2017 study showed that 26.8% youth were dispensed a medication within 6 months of diagnosis, with 89.2% of medication treated youth receiving buprenorphine [8]. It has become well known that longer periods of treatment are associated with significantly better opioid abstinence outcomes [8, 9]. With the 17 year old patient described, treatment initiation in September led to a relapse in November. Additionally, a three month treatment hiatus while in juvenile detention led to an immediate fentanyl relapse upon release.

Table 1: The prevalence of opioid use disorder

Gender		Age		Race	
Female	Male	18-34 years	35-48years	White	Others
33%	67%	58%	42%	75%	25%

Conclusion

An opportunity for increasing harm reduction is greatly evident with this case. An individual who was compliant with buprenorphine dosing has their dosing interrupted by incarceration and subsequently relapsed to significant fentanyl use before seeking out help. It has been identified that those with previous incarceration are at higher risk for overdose deaths than the general population. With that information, the decision was made to initiate this patient on extended release buprenorphine with hopes of achieving sustained therapeutic plasma levels.

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