



Case Report

Case Report: Relapsing Opioid Use Disorder in the Context of COVID-19

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Abstract

Background and Objectives: The COVID-19 pandemic has led to an increase in substance use and substance use disorder relapse, particularly opioid use and Opioid Use Disorder (OUD). We highlight an innovative approach in identifying and treating patients at risk.

Case Report: We present a patient with opioid use disorder, who was brought into the Emergency Department for an escalation in mood symptoms and self-injurious intent. She was initiated on Medication-Assisted Treatment (MAT) for opioid use disorder and responded favorably to treatment.

Discussion and Conclusions: This case demonstrates the effectiveness of MAT in the treatment of those with OUD. Additionally, it provides a framework for identifying risk factors to allow clinicians to stratify patients at risk to initiate and optimize treatment prior to relapse.

Scientific Significance: This case highlights the importance of MAT in the treatment of relapsing opioid use disorder, and highlights practical guidelines for clinicians to ensure the continued availability of treatment for patients with OUD during the COVID-19 pandemic.

Keywords: Addiction; COVID-19; Medication-Assisted Treatment; Opioid-Use Disorder; Recreational Drug Use.

Background

In less than one year, the COVID-19 (SARS-CoV-2) pandemic has had a shattering global impact. The morbidity and mortality of the novel coronavirus has also been compounded by the psychological sequelae of the pandemic. Between April and June of this year, symptoms of anxiety disorder and depressive disorder increased considerably in the U.S., compared to the same period in 2019 [1]. In a U.S. survey conducted on adults aged 18 and older this past June, 40.9% of respondents reported at least one adverse mental/behavioral health condition during the pandemic, with 30.9% endorsing anxiety/depressive symptoms and 26.3% experiencing symptoms of a Trauma-And-Stressor-Related Disorder (TSRD) [1]. Individuals who are isolated and stressed often turn to substance use to alleviate the negative feelings associated with their current stressors, and those who had already

been struggling with substance use are at increased risk of relapse [2].

Although literature regarding substance use in the context of COVID-19 is scant, research from a number of past disasters has suggested that there is an increase in substance use following exposure to a disaster [3]. Further, other studies have found that Post-Traumatic Stress Disorder (PTSD) and anxiety associated with disaster exposure are linked to increases in substance use to alleviate aversive emotional responses [3]. Since increases in symptoms of anxiety and depressive disorders, as well as symptoms of TSRD have already been observed during the COVID-19 pandemic, individuals may exhibit a similar pattern of coping with substance use. This maladaptive coping mechanism juxtaposed with stringent isolation measures further exacerbates the potential deleterious ramifications of new or increased substance use. For those in recovery, the implementation of social distancing measures has made it incredibly difficult, due to lack of access to meetings, support groups and necessary social interaction.³

Those with Substance-Use Disorders (SUD), including opioid-use disorder, have already long been marginalized by the health care system, largely owing to the stigma surrounding addiction. With hospital capacity overwhelmed by the pandemic, individuals with SUD are at increased risk for neglect due to deprioritization by the health care system, inability to obtain services or medications, and overdose [4].

While preliminary evidence indicates a relationship between the current pandemic and substance use disorder, it seems as though COVID-19 may disproportionately affect individuals with Opioid Use Disorder (OUD) [5]. Individuals with OUD are at increased risk for homelessness, incarceration, and severe mental illness, predicaments which do not allow for proper hygiene and social distancing measures [6]. There is also a risk that due to the strict regulations regarding substance use in the U.S., as well as increased difficulty in accessing narcotics during the pandemic, there will be a shift in the drug trade to more potent products that are easily transportable. This has been evidenced recently in the shift from heroin to fentanyl in the illegal market [6].

Lastly, there is evidence to suggest potentially worsened outcomes in patients with opioid use disorder who contract COVID-19. Drug-drug interactions have been identified in individuals co-administered medications for OUD and COVID-19; in particular, cardiac adverse events [5]. Additionally, opioid-related respiratory depression may amplify hypoxemia caused by COVID-19 viral pneumonia [5]. In order to highlight clinically the interplay of SUD and pandemic-related stressors, we report a case of opioid use relapse in the setting of a COVID-19 stressor and highlight an innovative, multi-pronged approach to identifying and treating patients at risk.

Case Report

The patient is a 48-year-old African American female with a past psychiatric history of major depressive disorder, self-injurious behavior and substance use, significant for opioid and stimulant use disorders, who was brought to the Emergency Department by her husband, due to concerns regarding the patient's recent escalation in mood symptoms and expression of self-injurious intent, including intentional drug overdose. The patient corroborated her husband's report and stated that she had been feeling very depressed for the past two weeks, following the recent death of her mother, who passed away after contracting COVID-19 at her nursing home. The patient endorsed symptoms of depression including sad mood, anhedonia, hopelessness, decreased appetite, and poor sleep. She was admitted to inpatient psychiatry for stabilization of depressive symptoms and to maintain safety.

The patient was previously being treated with citalopram, mirtazapine and quetiapine, but stated that she had not been adherent to her medication regimen for the past few weeks. While on the psychiatric unit, the patient also endorsed recently using

crack-cocaine (\$50-\$100/day) and heroin (2-4 bags/day), with last use 3 days prior to admission. She reported being clean for almost 3 years but relapsing after her mother's COVID-19-related death. The patient endorsed intense grief due to the loss of her mother, which brought back unresolved issues stemming from childhood sexual abuse by her biological father, leading to the removal of her and her siblings by CPS and their placement in group homes.

The patient stated that she had at first begun using substances at age 18, beginning with crack-cocaine and then eventually, opioids. She denied any injection drug use and stated she only used intranasally. She also stated that in the past, she had prostituted in order to finance her substance use. For the prior three years, she had been clean, which she credited to attending self-help meetings, having a sponsor, and support from her husband.

During her inpatient psychiatric admission, the patient was re-started on her home medications, and engaged in group and individual therapeutic activities. While receiving treatment, the patient expressed motivation to attain sobriety; however, her grief, re-activated PTSD symptoms and marginal social support network were seen as potential barriers to her successful sobriety. A consultation from a specialized Medication-Assisted Treatment (MAT) consultation team, which is available at our Behavioral Health Center, was requested to gauge her trajectory on motivation for change in recovery, to provide motivation enhancement and to assess for appropriateness for MAT for OUD. Based on her multiple stressors and comorbidities, she was deemed a good candidate to receive MAT. She was initiated on buprenorphine-naloxone 2mg-0.5mg BID, and responded extremely well to treatment, citing decreased cravings to use, decreased symptoms of withdrawal, and enhanced motivation to continue to receive treatment for her substance use disorder as an outpatient. Additionally, she described improvement in mood, and decreased symptoms of depression, such as hopelessness, anhedonia, and suicidal ideation. She denied any side effects from the medication and expressed a greater degree of hope that she would not relapse due to the diminished cravings. She was connected with an outpatient dual-diagnosis program and scheduled for a follow-up visit within 48 hours of discharge from the Behavioral Health Center. On discharge, the patient's mood was visibly improved, and she expressed optimism about her future.

Discussion & Conclusion

This case demonstrates the impact of the current pandemic on patients with substance use disorders. A number of studies have been executed to assess the relationship between COVID-19 and substance use. One study examined how COVID-19-related worry and fear differed between those who initiated substance use during the pandemic, those who had used before, and those who abstained. Overall, levels of worry and fear were highest in the population who initiated substance use during the pandemic.

Interestingly, for opioid use specifically, levels of COVID-19-related worry and fear were highest in those who had a history of prior opioid use.³ Additionally, worry played a larger motivational role to seek out substances than did fear. The results of this study provide preliminary evidence that COVID-19 related worry and fear may be presumed risk factors for substance use initiation and relapse utilized as a coping mechanism during the current pandemic [3]. The current patient was burdened by both worry and fear, particularly, fear of relapse due to her loss and the multiple stressors she was experiencing without resorting again to substance use.

Additionally, deaths from COVID-19 have left many without any resources or coping mechanisms. Recent research has demonstrated a markedly elevated prevalence of reported mental/behavioral health conditions associated with the COVID-19 pandemic, and suggests that new-onset substance use, as well as substance-use relapse is likely to increase in the face of social isolation, increased stress and grief, and lack of access to adequate health care and adaptive coping mechanisms [7]. Death of loved ones, loneliness, social isolation, complicated grief and bereavement have been associated with substance use and relapse [4]. These conclusions apply to the patient discussed above, as the loss of her mother due to COVID-19, and her fear of exposure for herself, were self-identified as clear triggers for relapse on substances.

This patient also demonstrates how the global COVID-19 pandemic is compounding the effects of the simultaneous addictions [4]. This patient had relapsed to using opioids and cocaine. Like this patient, many individuals suffering from SUD already experience housing instability, incarceration, and limited access to health care and recovery services. Further restrictions imposed on those resources during the current pandemic will only exacerbate their existing psychosocial stressors and potentially their substance use [4]. Additionally, research has shown a correlation between sudden unemployment and increased substance use, and as unemployment continues to increase during the pandemic, there may too be an increase in substance use and substance-use disorders, including OUD [4].

The current patient was at significant risk for intentional or accidental opioid overdose. There is concerning evidence that potentially fatal opioid overdoses are rising during the COVID-19 pandemic. The COVID-19 pandemic arrived amid the current Opioid Use Disorder (OUD) epidemic, which has seen a 2-fold increase in just a decade in the U. S [8]. In addition to all of the aforementioned risks of the pandemic on current or new substance use, individuals with OUD may be at an especially high risk of overdose during this period [9]. Consistent opioid use leads to tolerance, and after months of reduced access to the drugs, the tolerance may decrease considerably [5]. Once those individuals

are able to gain access to opioids again, they are at a higher risk for overdose [5]. In addition, the risk of overdose is heightened due to limited access to those who can call for help or administer naloxone [4]. The potential for accidental overdose is concerning, especially regarding the above patient, as she was expressing self-injurious thoughts through opioid overdose, putting her at greater risk of fatal overdose either intentionally or accidentally. A Kentucky study investigated significant changes in their EMS opioid overdose runs in the 52 days before and after March 6th, 2020, when the COVID-19 state of emergency was declared [10]. They analyzed data from the Kentucky State Ambulance Reporting System from January 14 to April 20, 2020, and they found a number of changes. In the pre-COVID period, EMS opioid overdose runs with transportation to the E.D. was 46.13%, increasing to 53.87% in the COVID-19 period. More startling, in the pre-COVID period, EMS opioid overdose runs with refused transportation to the E.D. was 36.86%, jumping to 63.14% during COVID. Furthermore, EMS runs for suspected opioid overdose with death at the scene was 40% until March 6th, and 60% by April 26th 2020 [10].

It is important to note that the current patient presented for care to an inpatient psychiatric unit, where SUD is often missed or underemphasized due to limited resources, lack of knowledge or fractured mental health and substance abuse treatment approaches and services. Once the mental health crisis has cleared, SUD treatment is often relegated to outpatient treatment. Based on the conclusions of the current research regarding COVID-19 and substance use disorders, as illustrated by the case discussed above, it is imperative that mental health clinicians integrate mental health and SUD treatment, regardless of the setting in which the patient is encountered. Our MAT consultation service was developed to address this issue in our inpatient psychiatric population. Over the past three years, over 300 patients have received comprehensive SUD assessment, Motivation Enhancement Therapy, initiation of MAT and linkage to dual diagnosis services upon discharge. Additionally, we have noticed and previously published regarding how patients with co-occurring mood disorders and opioid use disorder frequently report drastic improvements in depressive symptoms and suicidality after being initiated on buprenorphine-naloxone treatment [11,12]. This has been replicated by multiple other studies, and warrants further investigation [13-15].

Further research is necessary to elucidate the relationship between substance use and COVID-19, however there is no doubt that identification and treatment are urgently needed. Clinicians should monitor their patients for new signs of substance use, which may be a challenge given the expanded use of telehealth.

Ironically, diminished access to illegal narcotics during the COVID-19 pandemic may actually provide an opportunity for increased initiation of methadone or buprenorphine treatment, but

access to these treatments is paramount. Changes have already been made on the federal level to allow for increased ease of access to MAT during COVID-19, however there still exist structural barriers to the enactment of these changes [11]. Primary care physicians as well as psychiatrists should consider undergoing the SAMHSA Medication Assisted Treatment training to receive their waiver to prescribe buprenorphine-naloxone, in anticipation of the growing need that will likely follow the aftermath of this pandemic. Federal and State regulatory agencies should develop guidelines for safe administration of MAT via tele-health platforms. In addition, social policies that impact health directly or indirectly, as well as tailored prevention strategies should be studied and implemented to try to mitigate the risks associated with COVID-19 and substance use, and to serve as guidelines for future pandemics.

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Declaration of Interest

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of this paper.

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