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Case report

Ketamine-Assisted Psychotherapy for Suicide Crisis Syndrome: Case report

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Abstract

Suicide Crisis Syndrome (SCS) is a pre-suicidal mental state. SCS encompasses the elements of entrapment, disturbance in affect, hyperarousal, loss of cognitive control, and social withdrawal. Suicide is usually the eventual final pathway of SCS and is presently the 10th leading cause of death in the United States. With the current suicide rate steadily increasing over the past decades, novel approaches to treating SCS and suicidal patients are imperative. There has recently been a paradigm shift in interventions for mood disorders with suicidality and SCS, with the adoption of treatment modalities utilizing psychoactive substances. The Food and Drug Administration (FDA), for example, recently approved the treatment of post-traumatic stress disorder (PTSD) with 3,4-MethyleneDioxyMethamphetamine (MDMA) guided psychotherapy. Psilocybin (with psychological support) was also recently approved for Treatment-Resistant Depression (TRD). Psychotherapy in the form of Cognitive Behavior Therapy (CBT) has been the standard of care and the current gold standard psychotherapeutic modality for managing patients with Suicidal Behavior and SCS. With Intravenous (IV) ketamine—a newly FDA-approved treatment modality for acute Suicidal Ideations (SI) and Suicide Crisis Syndrome (SCS)—now on the market, and the proven effectiveness of CBT, we have combined the two (ketamine and CBT) in the form of ketamine-guided psychotherapy to successfully treat a patient with SCS in an acute suicidal state.

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Introduction

Suicide remains the 10th leading cause of death in the United States, with a steady increase in completed suicides over the past decade. Approximately 90% of the individuals who die from suicide suffer from a treatable psychiatric disorder [1-5]. Current treatment options for acute Suicidal Ideation (SI) and/or Suicide Crisis Syndrome (SCS) are psychiatric hospitalization, pharmacotherapy, psychotherapy, Deep Brain Stimulation (DBS),Electroconvulsive Therapy (ECT), or a combination. Still, they are limited in their scope, access, and effectiveness. These treatment modalities can also be limited by the significant delay from treatment to an effective response of several days to weeks [6]. Intravenous (IV) ketamine is an FDA-approved treatment modality reported to provide a timely and efficient approach to targeting acute S.I. in patients with SCS [7]. Treatment with IV infusions at sub-anesthetic doses of ketamine has been reported to display rapid-acting antidepressant properties (and potential anti-suicidal properties) in those suffering from mood disorders, with the ability to stabilize those with imminent risk of suicide [8]. In a meta-analysis on the effects of ketamine on suicidal ideation, 54.9% of the patients were free of suicidal ideation 24 hours after a single ketamine infusion, and 60.0% were at one-week post-ketamine [3]. Cognitive behavior therapy with brief psychotherapy is an evidence-based modality that has also shown efficacy in targeting S.I., SCS, suicidal behavior, and hopelessness, with sustained effect over time [9]. Herein, we present a case where these two modalities were combined (Ketamine-assisted psychotherapy) in a treatment intervention for a patient with SCS in an acute suicidal state.

Case Presentation

The patient is a 30-year-old female with a history of Major Depressive Disorder (MDD) who was transferred from an outpatient clinic to the Emergency Department (ED) with the chief complaint of acute onset suicidal ideation with intent and plan, without attempt, with stated distressing concerns of "I ask myself why I am still living". She reported a progressive worsening of her longstanding depression with an acute superimposed major depressive episode with onset two months before presentation. Her current presentation was notable for suicidal thinking with a new onset of intent and a plan for a suicide attempt through an overdose of her present medications. This was in the context of worsening anhedonia, an elevated sense of hopelessness, and intense, unpleasant negative emotions with a ruminative pattern. The Emergency Department (E.D.) team consulted the Psychiatric Consultation-Liaison (C/L) service to evaluate potential psychiatric inpatient hospitalization, management assistance, and mood stabilization.

Upon evaluation and history gathering, she had no significant medical history. There was no reported history of substance use, no

history of a manic or hypomanic episode or psychosis, no history of suicidal attempts or self-harm behaviors, and no history of previous inpatient psychiatric hospitalization. At the time of assessment, she was engaged and employed. She denied using any substances, including alcohol, cigarettes, cannabis, and other illicit substances. Her basic labs and vitals were stable and within normal limits. She reported adherence to her antidepressant (Fluoxetine 20 mg P.O. Daily), which reportedly had been initially effective for a time at mitigating the severity of her depression and the frequency of her suicidal thoughts. Nevertheless, despite her treatment adherence, she remained frequently suicidal with ongoing thoughts of overdosing. She described her mood as "empty," and her affect was congruent to her dysthymic state. She was not agreeable to voluntary inpatient psychiatric hospitalization. Thus, the psychiatric CL team proposed a plan to provide Ketamine-Assisted Psychotherapy (KAP) treatment to target her acute suicidal state. After the benefits/risks/and alternative treatment for her depression and S.I. were discussed, the patient and primary team consented to proceed with KAP.

After obtaining consent for this experimental and off-label procedure from the patient and discussing risks, benefits, and alternatives, the patient elected to proceed with IV ketamine was administered in the E.R., with IV Ketamine dosed at 0.5 mg/kg (24 mg) infused over 40 minutes. Throughout the infusion process, the resident and supervising psychiatrist provided psychological support and delivered psychotherapy (CBT). During KAP, the patient experienced abreaction, crying loudly that her parents had never loved her and that she "Just needed someone to love me." Of significance, during exchanges in the session, she reported constantly feeling that her parents "never supported her" despite her accomplishments, and she was constantly seeking "validation" from others. She was visibly distressed during KAP, exhibiting a flood of emotions. Support and guidance were provided to facilitate the development of new thought patterns. As the infusion progressed, she was engaged in guided introspection to identify cognitive distortions, her tendency for catastrophizing, all-or-nothing thinking, mislabeling, overgeneralizing, and discounting the positive;she was guided to reframe her perspectives with cognitive restructuring techniques of disputing, de-catastrophizing, and Socratic questioning; this ultimately resulted in the patient being able to focus on the positive of her love for her fiancé and other optimistic aspects of her life despite her current circumstances and stressors, as well as to reorient in her use of labels and dispute the veracity of prior held distortions.

No significant adverse effects were seen or reported during the infusion therapy. However, during the infusion, the patient's blood pressure intermittently elevated from her baseline of 103/64 mmHg to a max of 148/95. This was not sustained, however, and resolved to 107/72 and 101/72 status post 30 minutes and 1.5 hours of KAP, respectively. During infusion, the patient was briefly tachycardic with a Heart Rate (HR) of approximately 120 Beats Per Minute (BPM), and she voiced strong emotions toward her internal conflicts. She was, however, responsive to redirection and a reorientation of her negative perspective with a return to her baseline HR of between 70-80s (BPM). She reported immediate improvement in her mood, denying suicidal ideation (suicidal intent and/or plan), and expressing optimism for the future on assessment post-KAP.

This patient presented with Suicidal Crisis Syndrome (SCS) and an active suicide state exacerbated by (chronic and) active feelings of hopelessness, helplessness, and worthlessness. Her high suicide risk state was safely managed with KAP, successfully resolving her S.I. The success of the intervention resulted in the forgoing of plans for inpatient psychiatric admission for stabilization and further management (to occur on an outpatient basis). The patient and her fiancé were counseled and agreed to further outpatient management with follow-up at the outpatient psychiatry clinic. The importance of adherence to her antidepressant was stressed with a newly increased dose of Fluoxetine 40 mg P.O. daily. Overall, the patient was medically stable, psychiatrically improved, and discharged to go home with transport provided by ride-sharing services. The patient and her fiancé were contacted two days later. They reported sustained, noticeable improvement in the patient's mood and resolved S.I. She remained future-oriented with a travel plan with her fiancé in the upcoming months.

Discussion

Ketamine-assisted psychotherapy is a safe, efficient, and effective treatment modality to treat patients with SCS in an acute suicidal state. Ketamine's efficacy in resolving acute suicidal ideation and SCS, as has been postulated, is secondary to its unique mechanism, which includes dissociative phenomena, as well as an alteration in consciousness similar to those engendered by serotonergic hallucinogens [10]. Ketamine's unique properties help to facilitate access to the patient's cognitive distortions, allowing for an intervention in which the cognitive rigidity that entrenches the feeling of entrapment and hopelessness (that consequentially leads to the misconception that suicide is the only viable solution) is addressed. The simultaneous psycho-therapeutical intervention during the ketamine infusion enabled greater tolerability and response to the IV ketamine, thus facilitating the development of a stronger therapeutic bond with the psychiatrist (as therapist) throughout the whole process.

This case illuminates the potential for ketamine guided therapy to mitigate the pathophysiological thought distortions prevalent in SCS, allowing a deeper engagement with the therapist and resulting in a cathartic response. While the ketamine treatment intervention allowed the therapist a facilitated access modality to the patient's self-created suicidal narrative maladaptive coping mechanism, the psychotherapy facet of the procedure played the key role of ensuring that the patient had a monitoring reassuring guide. The two aspects of the treatment benefited the patient by assisting in the introspection and processing of childhood traumatizing internal conflicts (that unexpectedly arise amidst this acute stressor) from her subconscious thought process, thus creating an environment where the patient's traumatic distressing and distorted thought patterns and experiences could be readily addressed and reframed and restructured.In other words, the resolution of the patient's SCS and acute suicidal state could be due to a possible synergistic effect of the two treatment modalities, which are areas worth exploring further with additional research.

This case highlights the novel implementation of a fast-acting intervention that targets the suicidal narrative with ketamine-assisted psychotherapy. The stabilization of suicide crisis syndrome (hopelessness from a perceived inescapable life situation, frantic anxiety, and/or sense of entrapment) could potentially be modulated with this novel combination. Although we successfully treated this patient using the KAP modality, this modality is currently experimental. Not all patients are expected to respond fully to KAP treatment modalities. As such, it is warranted that the patient's suicidal risk status post-KAP be monitored closely, and the patient be judiciously reassessed

for further needed stabilization in an inpatient psychiatric setting (if needed). This is one of the few cases to combine ketamine infusion with the CBT treatment modality for treating SCS in an actively suicidal patient. With the recent FDA approval of the treatment of PTSD with 3,4-MethyleneDioxymethamphetamine (MDMA), guided psychotherapy [11], and psilocybin (with psychological support) for Treatment-Resistant Depression (TRD), we hope that such treatment modalities for SCS in acutely suicidal patients will be considered for broader use (Table 1).

DIAGNOSTIC CRITERIA FOR SUICIDE CRISIS SYNDROME (SCS)
Adapted from the Criteria for Suicide Crisis Syndrome by Yaseen et al [8]

A. ENTRAPMENT: A persistent or recurring feeling of urgency to escape or avoid an unescapable life situation perceived as impossible to escape, avoid or endure.

B. ASSOCIATED DISTURBANCES

I. Affective disturbance (manifested with at least one of the following):
a) Emotional pain
b) Rapid spikes of negative emotion or extreme mood swings
c) Extreme anxiety that may be accompanied by dissociative or sensory disturbances
d) Acute anhedonia

II. Loss of cognitive control (manifested with at least one of the following):
a) Intense and persistent thoughts about one's distress
b) Cognitive rigidity—inability to deviate from repetitive negative thought patterns
c) Ruminative flooding and cognitive overload
d) Repeated unsuccessful attempts to suppress negative or disturbing thoughts

III. Disturbance in arousal:
a) Irritability
b) Hypervigilance
c) Agitation
d) Global insomnia

IV. Social withdrawal:
a) Evasive communication
b) Withdrawal/reduction in social scope capacity

Table 1: Diagnostic Criteria for SCS.

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