

Case Report

SCRA and its Reaction!

Shishodia A^{1*} and Jaiswal P²

¹Department of Addiction Medicine, GMMH, UK

²Department of Addiction Medicine, Turning Point, UK

Abstract

A 22 year-old men started using Synthetic Cannabinoid Receptor Agonist (SCRA) around 24 months ago whilst being in prison to self-medicate for loneliness, anxiety and aggression in the background of anti-social personality disorder. Evidence of treatment around Synthetic Cannabinoids Receptors Agonist (SCRA) are elusive and there is lack of clarity. This case-report summarizes use of Benzodiazepines for inpatient detox treatment of Synthetic Cannabinoid Receptor Agonist (SCRA) and the mechanism behind them.

Keywords: Synthetic cannabinoid receptor agonist; Anxiety; Diazepam; Metoclopramide

Introduction

Synthetic drugs are an increasingly popular category of addictive substances derived from chemical compounds. Illicitly manufactured by “street chemists” using technically legal chemicals, they are considered far riskier than naturally sourced drugs [1-4]. It is not easy to determine the contents of each SC product or to predict its pharmacological and toxicological characteristics [3-6].

The suggestive treatment for synthetic cannabinoid is based on its structural analogue to the GABA receptors. By writing this case report, is to provide further clinical guidance on treatment.

Case Presentation

A 22 year-old Caucasian male was admitted to the in-patient unit for synthetic cannabinoid detox. Client was going through emotional breakdown 24 months ago due to history of recidivism and incarceration in prison and described symptoms consistent with anti-social personality disorder mainly feeling of aggression, anger and variable mood. Client had difficulties making sense of his aggression and anger and was exposed to synthetic cannabinoids whilst being in prison. Client described feeling settled with his aggression and variable mood states. Client when trying to reduce synthetic cannabinoids experienced periods of negative mood state mainly amotivation and slowness of thoughts, leading for further escalation of use. Client described experiencing auditory hallucinations, tremors, rebound anxiety, altered sensations and transient psychotic episode when intoxicated. Client felt prior to the admission difficulties in coming off the synthetic cannabinoids, requesting for detox.

Treatment

Diazepam was considered due to structural analogue with to the neurotransmitter γ -aminobutyric acid (GABA). A literature search revealed that, diazepam was used in similar cases before, though the

evidence is not satisfactory. Client was commenced on reducing dose of Diazepam, starting at 10 mgs 4 times a day, gradually reduced over period of 5 days. Client was also prescribed PRN Diazepam. Client was also prescribed ancillary medication such as Loperamide (loose motion), Metoclopramide (vomiting) and Promazine (anxiety and agitation) on PRN basis.

With continuing observation and monitoring on the unit and support of the therapy team, it was observed that the client responded well to the treatment. There was gradual reduction in his anxiety with improved emotional state and future planning. The patient was discharged after a further short uneventful period of monitoring.

Outcome and follow-up

The client has remained stable at point of discharge from the unit and will continue to receive support from the community drugs and alcohol team along with mental health services.

Discussion

Poly-drug use is common among SCRA users; primary route of administration of SCRA is inhalation, either by smoking the ‘herbal mixture’ as a joint, or by utilising a vaporiser, bong or pipe. Both oral consumption and snorting of the compounds have also been described. There are also reports that SCs can be ingested as an infusion, although this is rare. There are no reports of parenteral use so far. The onset of the action of SCs is usually within minutes of smoking, like cannabis, because of the instant absorption via the lungs and redistribution into the brain and other organs, within minutes of use. There is a delay of absorption following oral consumption.

The desired effects of SCs are similar to those of cannabis intoxication: relaxation, altered consciousness, disinhibition, a state of ‘being energised’ and euphoria. SCs are five times more likely to be associated with hallucinations [1,2].

SCRA acute effect is characterised by the following:

- Central nervous system: Agitation, tremor, anxiety, confusion, somnolence, syncope, hallucinations, changes in perception, acute psychosis, nystagmus, convulsions, and coma
- Cardiac: Tachycardia, hypertension, chest pain, palpitations, EGG changes
- Renal: Acute kidney damage

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***Corresponding author:** Shishodia A, Department of Addiction Medicine, GMMH, UK, E-mail: ashokshishodia@yahoo.co.uk

- Muscular: Hypertonia, myoclonus, muscle jerking, myalgia
- Other: Cold extremities, dry mouth, dyspnoea, mydriasis, vomiting, hypokalaemia Loss of eyesight and speech also reported.
- Psychological and Psychiatric effects: Thought blocking, nonsensical speech, logia, negative mood changes with odd/flat affect.

It has therefore been recommended that clinicians need to rely on clinical skills to detect SCRA use. This includes specifically asking about SCRA, being aware of the physiological effects, such as conjunctival injection, and having a high index of suspicion in the context of unexplained deterioration despite a negative urine screen [2,7].

Conclusion

Due to its structural similarities with GABA, Diazepam was used to treat the withdrawal symptoms. It is imperative that appropriate questions are asked regarding use of any form of illicit substances that are sourced from the internet or the dark web, as they are easy to be missed. This can lead to protracted treatment or failures.

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