



TREATMENT OF SOCIAL ANXIETY DISORDER AND PANIC ATTACKS WITH FULL-SPECTRUM MEDICAL CANNABIS LEAF EXTRACT TINCTURE: A CASE REPORT

Author information:

¹Vaibhav Mishra, ^{2*}Arzoo Puri, ³Kartik Sharma, ⁴Harsh Bokadia, ⁵Ayesha Qazi

¹Assistant Surgeon, ^{2*}Researcher, ³Researcher, ⁴Researcher, ⁵Researcher

¹Department of General Surgery, Urmila Memorial Hospital, Raipur 492001, Chandigarh, India

²Department of Research and Development, Cannazo India

²Department of Biological Sciences, Sunandan Divatia School of Science, NMIMS Deemed to Be University, Vile Parle (West), Mumbai 400056, Maharashtra, India

³Department of Research and Development, Hexorp Nanotech Pvt Ltd, M.P. - 457779, India

³Department of Biochemistry, Deshbandhu College, University of Delhi, Delhi, India

⁴Department of Research and Development, Cannazo India, Mumbai – 400001, India. Department of Biological Sciences, Sunandan Divatia School of Science

⁴Department of Research and Development, Cannazo India, Mumbai – 400001, India.

⁵Department of Pharmacy, SVKM's NMIMS Deemed to Be University, Vile Parle (West), Mumbai 400056, Maharashtra, India

⁵Department of Research and Development, Cannazo India, Mumbai – 400001, India.

^{2*}Corresponding Author: Ms. Arzoo Puri

Department of Research and Development, Cannazo India, Mumbai – 400001, India

Department of Biological Sciences, Sunandan Divatia School of Science, NMIMS Deemed to Be University, Vile Parle (West), Mumbai 400056, Maharashtra, India

Abstract

Background: Social anxiety disorder (SAD) is a psychiatric disorder which is characterized by excessive fear of social situations like public speaking and interacting with new people, and affects 5-10% of people globally. SAD is treated with medications like serotonin reuptake inhibitors and tricyclic antidepressants, which are efficacious but have side effects like weight gain and sexual dysfunction. Thus, research on alternative approaches like medical cannabis is increasing. This case report aims to show the efficacy of full-spectrum medical cannabis leaf extract tincture oil for the treatment of SAD and panic attacks.

Case presentation: We present the case of a male patient, 29 years old, with severe social anxiety disorder patient who has experienced panic episodes for six to eight years. The patient experienced avoidance behaviours, intense fear of negative evaluation, and distress in social situations, which are consistent with the diagnostic criteria for SAD. The patient was prescribed 4-5 drops of Vijaya Amrit sublingually (a full-spectrum medical cannabis leaf extract) at bedtime, along with meditation and aerobic exercises for two months. The Liebowitz Social Anxiety Scale and the Panic Disorder Severity Scale were used to analyse the improvement in the symptoms and address the condition.

Conclusions: After 2 months of treatment with full-spectrum Vijaya Amrit, the Liebowitz Social Anxiety Scale score decreased by 62% from 101 (recorded on Day 1) to 38, and the Panic Disorder Severity Scale score

decreased by 72% from 25 (recorded on Day 1) to 7, indicating that the patient has mild social anxiety and has experienced substantial alleviation of panic symptoms after treatment. Thus, using full-spectrum Vijaya Amrit helped in relieving the patient's social anxiety and panic disorder symptoms.

Keywords: medical cannabis extract, social anxiety disorder, panic attacks

Introduction

Social anxiety disorder (SAD) is a psychiatric disorder which is characterised by excessive fear of social situations like public speaking and interacting with new people (1). Globally, 5-10% People have SAD, which is the most common anxiety disorder. The lifetime prevalence of SAD is estimated to be as high as 8.4-15% (2). SAD is diagnosed using criteria. such as excessive fear in social situations that trigger anxiety, experiencing distress or anxiety and interference with numerous aspects of daily life routine-like relationships and academic functioning (3). Post-diagnosis, multiple pharmacotherapeutic treatment options are available, like tricyclic antidepressants and selective serotonin reuptake inhibitors (SSRIs). SSRIs, such as sertraline and fluvoxamine are considered the first line due to their established efficacy, low abuse potential and safety profile. They prevent the reuptake of serotonin, also called 5-hydroxytryptamine (5-HT), increasing its level in the brain, thereby improving mood and sleep (4).

However, SSRIs may be ineffective in resistant individuals. Cascade et al. (2009) reported numerous side effects of SSRIs, including sexual dysfunction, weight gain and sleepiness (5). Other less common adverse effects include gastrointestinal discomfort, like nausea and abdominal pain, headaches, dry mouth and sweating (6). Consequently, alternative new-line treatments like medical cannabis (MC) leaf-based medications (containing cannabidiol (CBD)) are gaining attention. Medical cannabis leaves are used to prepare full-spectrum leaf extracts containing cannabinoids which have effects like:

- Anti-inflammation
- Decreased pain
- Improved sleep
- Reduced stress and anxiety (7)

Cannabinoids interact with the endocannabinoid system (ECS), consisting of receptors like cannabinoid 1 and 2 (CB1, CB2) and also with serotonin 1A (5-HT1A) receptors present in the nervous system, reducing neurotransmitters linked to stress and anxiety (8). Numerous trials and case studies report that cannabinoids decrease anxiety-related symptoms. An observational study by Martin et al. (2021) reported that patients using MC for anxiety experienced less pain, better sleep and better quality of life (9). A cohort study conducted by The UK Medical Cannabis Registry found that patients using MC experienced significantly improved sleep quality as measured by the sleep quality scale (SQS) and reduced anxiety levels based on the Generalised Anxiety Disorder-7 (GAD-7) questionnaire (10). Given the limited clinical evidence available in India on the use of medical cannabis for managing anxiety, this case report aims to evaluate the therapeutic efficacy of full-spectrum medical cannabis leaf extract as an alternative treatment option for SAD and panic attacks, where conventional treatments have failed, and to contribute to the growing body of literature by highlighting its therapeutic potential in an Indian context. Cannabinoids interact with the endocannabinoid system (ECS) consisting of receptors like cannabinoid 1 and 2 (CB1, CB2) and also with serotonin 1A (5-HT1A) receptors present in the nervous system, reducing neurotransmitters linked to stress and anxiety (8). Numerous trials and case studies report that cannabinoids decrease anxiety-related symptoms. An observational study by Martin et al. (2021) reported that patients using MC for anxiety experienced less pain, better sleep and better quality of life (9). A cohort study conducted by the UK Medical Cannabis Registry found that patients using MC experienced significantly improved sleep quality as measured by the sleep quality scale (SQS) and reduced anxiety levels based on the Generalised Anxiety Disorder-7 (GAD-7) questionnaire (10). Given the limited clinical evidence available in India on the use of medical cannabis for managing anxiety, this case report aims to evaluate the therapeutic efficacy of full-spectrum medical cannabis leaf extract as an alternative treatment option for SAD and panic attacks, where conventional treatments have failed, and to contribute to the growing body of literature by highlighting its therapeutic potential in an Indian context.

Case Presentation

A 29-year-old male software developer with a work schedule of 7-8 hours daily, sought medical attention for long-standing SAD and escalating panic attacks. His symptoms had persisted for 6-8 years, progressively worsening over the past 2-3 years. He also reported occasional neck stiffness and backache, possibly due to stress-related musculoskeletal tension and loss of appetite. The patient's social anxiety was debilitating, significantly impacting his professional and personal life. He described avoidance behaviours, intense fear of negative evaluation, and distress in social situations consistent with SAD's diagnostic criteria. His panic attacks had worsened in the past two months, marked by slurred speech during episodes of heightened anxiety, and physical symptoms like palpitations and sweating, further affecting his daily functioning. He was started on Tab Escitalopram 5mg twice daily and Tab Amitriptyline 5 mg at bedtime. The symptoms remained inadequately controlled, indicating treatment resistance. While his appetite improved, His sleep remained disturbed, and he occasionally experienced constipation. Given the limited response to standard treatment, novel interventions were initiated; Vijaya Amrit, a Full-spectrum medical cannabis leaf extract tincture (manufactured by Hexorp Nanotech Pvt Ltd, Survey No. 626/7 Gram Agral, Teh. Meghnagar, Dist. Jhabua, M. P. 457779 and marketed by Cannazo India) along with meditation and aerobic exercises.

Vijaya Amrit is a Ministry of Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homoeopathy (AYUSH) approved Schedule E medicine. It is a 15ml tincture containing full-Spectrum medical cannabis leaf extract in medium-chain triglyceride (MCT) oil, with a potency of 2000mg/15ml ~133.3 mg/ml. Each millilitre (ml) contains 20 drops, translating to approximately 6.6mg extract per drop. The patient was instructed to take 4-5 drops (26.4-33 mg extract) sublingually at night hora somni (HS), 30 minutes post-dinner for 2 months.

The intervention yielded promising results. Significant improvements were observed in both social anxiety and panic symptomatology over 2 months. The Liebowitz Social Anxiety Scale (LSAS) and Panic Disorder Severity Scale (PDSS) were used to assess changes in the patients' symptoms before and after treatment. The patient's LSAS score decreased from 101 (indicating very severe social anxiety) on Day 1 (21/6/23) (Fig 1) to 38 (reflecting mild social anxiety) (Fig 2).

The LSAS has a cutoff score of 30 or higher for diagnosing SAD (Table 1), with scores above 95 indicating very severe social anxiety (11). Marked reduction in social anxiety severity indicated a clinically meaningful response to medical cannabis leaf extract tincture.

Furthermore, the patient's Panic Disorder Severity Scale (PDSS) scores demonstrated notable improvement (Table 2). It dropped from 25 (moderate) on Day 1 (21/6/23), to 19 on Day 31 (22/7/23), and further to 7 on Day 61 (23/8/23), indicating a substantial reduction in panic symptoms (Fig 3). The PDSS (12) consists of seven questions, which can be rated from 0 to 4, assessing various aspects of panic disorder severity, including distress, functional impairment, panic frequency, anticipatory anxiety and phobic avoidance. The reduction in panic severity demonstrated the interventions in treating acute anxiety and relieving symptoms. The patient also reported improved sleep and appetite following continued treatment with Vijaya Amrit tincture.

Importantly, Common side effects associated with medical cannabis medications, such as dizziness and constipation (13,14), were not observed in this case, further indicating the well-tolerated nature of the intervention.

Discussion and Result

SAD often leads to avoidance behaviours and reduced quality of life (15,16). Various studies have indicated that treating SAD using cannabinoids like CBD has many benefits over that of conventional antidepressants and anti-anxiety medications. Full-spectrum medical cannabis extract (containing cannabinoids) demonstrates faster action, fewer side effects, and lower drug interaction risks (17).

In this case, social anxiety improved from very severe to mild, and panic disorder symptoms significantly decreased. After 2 months of treatment with full-spectrum cannabis extract-based tincture, the LSAS score decreased by 62%, and the PDSS score decreased by 72%, indicating that the patient has mild social anxiety and experienced substantial alleviation of panic symptoms (Fig 4). This significant reduction in both panic disorder

and social anxiety disorder severity tells that cannabis based-intervention is an effective option of therapy. The results point toward increased emotional regulation, reduced symptom intensity, and improved everyday functioning, which contributes positively to the patient's quality of life. Over 61 days, panic disorder severity scale composite scores showed a continuous decline, starting at 3.6 on Day 0 (21/6/23), decreasing to 3.1 on Day 31 (22/7/23), and further dropping to 2.0 by Day 61 (23/8/23) (Fig 5) (12). This was accompanied by improvements in sleep, neck stiffness and slurred speech.

The improvements may be attributed to cannabinoids; CBD's action on the nervous system and ECS. Animal studies have indicated that CBD exerts anxiolytic, panicolytic and anti-depressant effects via 5-HT_{1A} receptor activation, enhancing serotonergic signalling (18–20). A clinical trial also linked symptom relief to decreased regional cerebral blood flow (rCBF) in the amygdala, rhinal cortex, and parahippocampal-hippocampal regions (21). In 2011 another trial reported reduced rCBF in the inferior temporal gyrus, left parahippocampal gyrus and hippocampus, Post-treatment with CBD in SAD patients (22). Thus, CBD might relieve anxiety symptoms via 5-HT_{1A} receptor activation and modulating the rCBF. A clinical trial (NCT02548559) conducted by Dahlgren et al. (2020) also reported 15% symptom reduction within one month post full-spectrum CBD treatment (13). Studies have demonstrated that low dosages of tetrahydrocannabinol (THC) can produce anxiolytic effects, such as decreased negative emotional responses, and in combination with CBD, produce synergistic effects (23).

Evidence suggests that CBD may also increase the concentration of endogenous cannabinoids like anandamide and 2-arachidonoylglycerol (2-AG), which exert anxiolytic effects via the activation of CB₁ receptors. CBD inhibits their degradation and reuptake, helping to regulate anxiety-related pathways.

While SSRIs are standard SAD treatments, they come with side effects like GI discomfort (5,6). In contrast, the patient treated with full-spectrum medical cannabis reported improved sleep and no adverse effects. The use of medical cannabis varies from country to country. In India, the medical use of medical cannabis extract has been approved as Schedule E Ayurvedic medicine under the Ministry of AYUSH. Although this is a one-patient case study, it provides clinical evidence supporting the efficacy of medical cannabis leaf extracts for treating SAD.



Figure 1: The LSAS questionnaire reveals that the patient has severe social anxiety with a score of 101 (a). The scores of individual questions on the first visit have also been shown (b and c). (LSAS: Liebowitz Social Anxiety Scale)

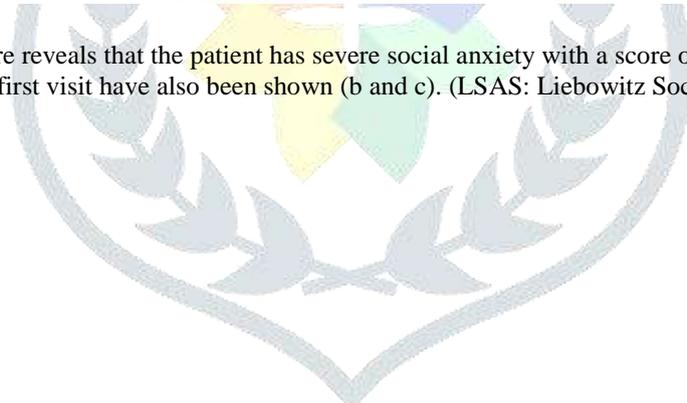


Figure 2: The LSAS questionnaire taken by the patient after 2 months of treatment with VijayaAmrit reveals that he now has mild social anxiety with a score of 38. (LSAS: Liebowitz Social Anxiety Scale)



Figure 3: The PDSS scores of the patient as per the primary physician at baseline and one and two months after treatment with Vijaya Amrit. The total scores decreased from 25 to 7 after treatment, indicating a decrease in panic disorder symptoms.

Social Anxiety and Panic Disorder Scores

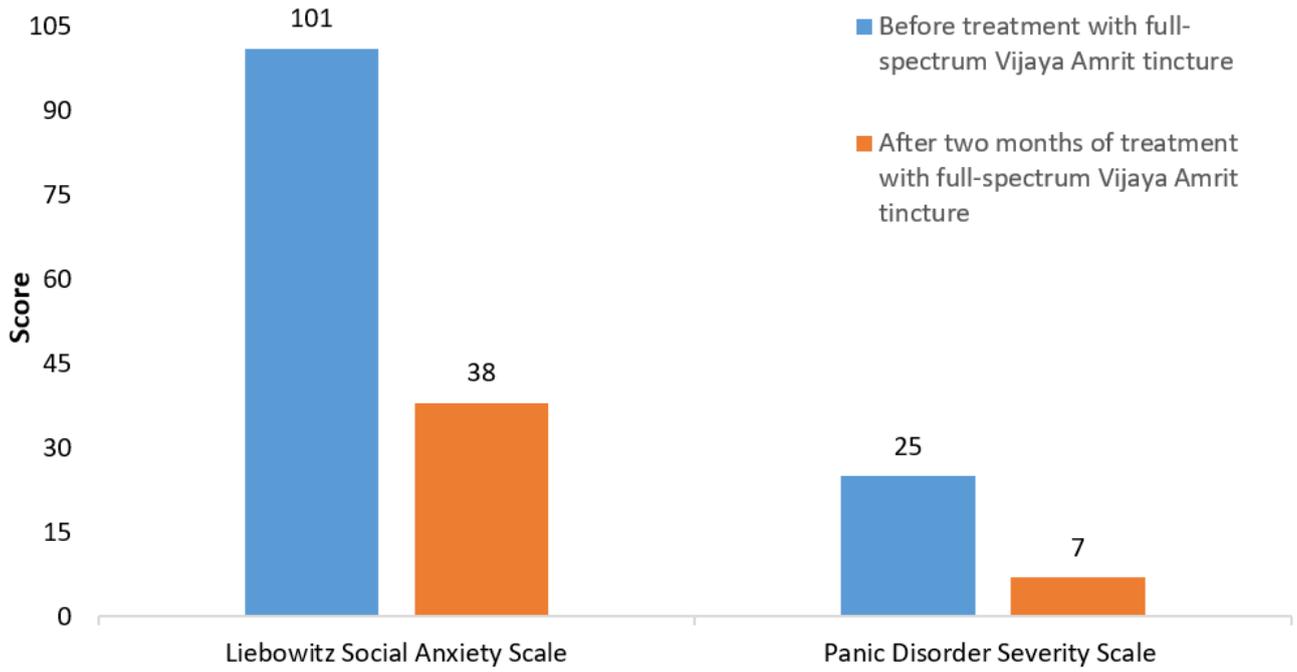
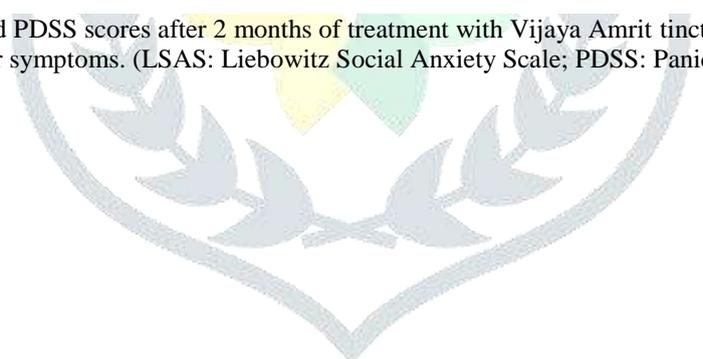


Figure 4: The change in LSAS and PDSS scores after 2 months of treatment with Vijaya Amrit tincture indicates that it helped relieve anxiety and panic disorder symptoms. (LSAS: Liebowitz Social Anxiety Scale; PDSS: Panic Disorder Severity Scale)



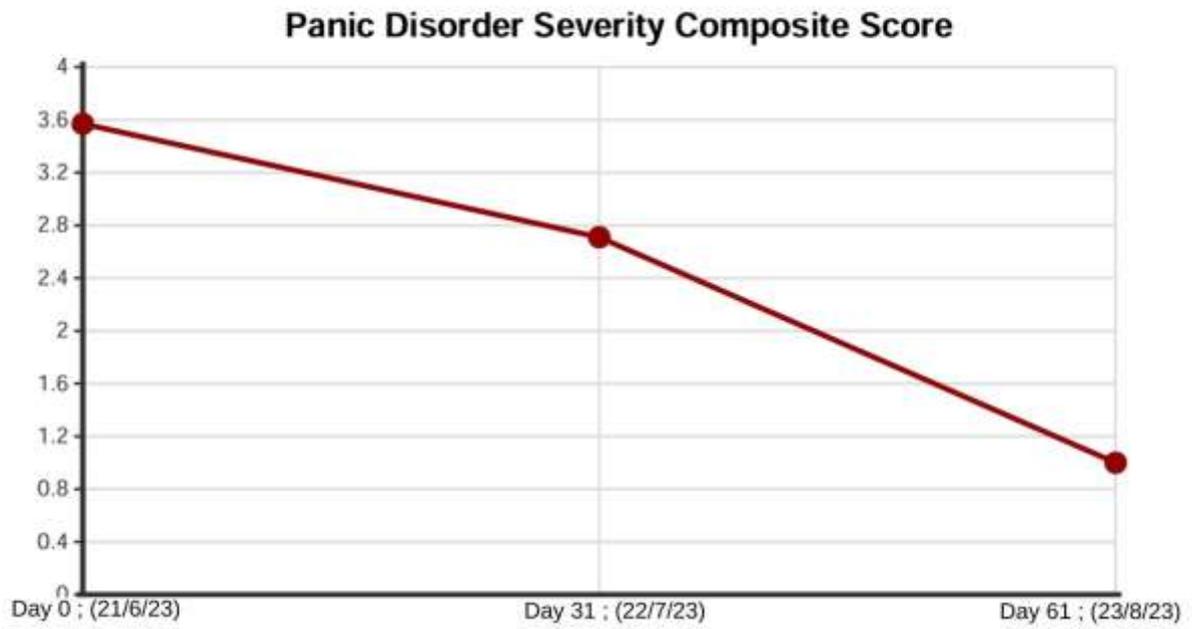


Figure 5: Reduction in Panic Disorder Severity Scale (PDSS) Composite Scores Over 61 Days

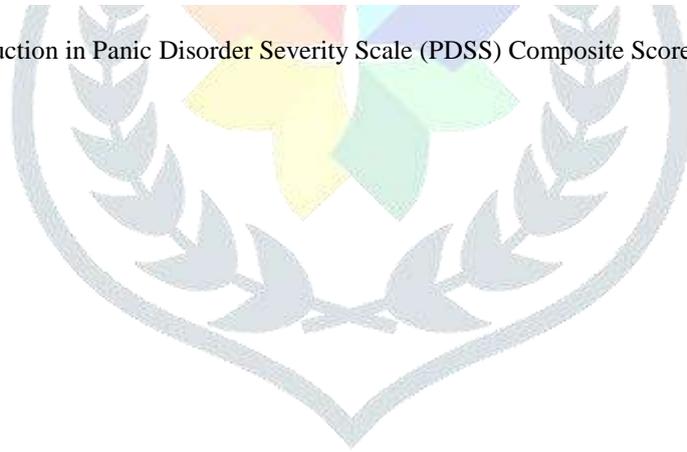


Table 1 LSAS scores indicating the severity of social anxiety disorder.

LSAS Score	Diagnosis
95 and above	Very severe social anxiety
80 - 94	Severe social anxiety
65 - 79	Marked social anxiety
50 - 64	Moderate social anxiety
30 - 49	Mild social anxiety
0 - 29	No social anxiety

Table 2 The PDSS scores of the patient as per the primary physician at baseline and one and two months after treatment with Vijaya Amrit. The total scores decreased from 25 to 7 after treatment, indicating a decrease in panic disorder symptoms.

Questions	PDSS scores across days		
	0 days	31 days	61 days
How many panic and limited symptoms attacks did you have during the week?	4	3	1
If you had any panic attacks during the past week, how distressing (uncomfortable, frightening) were they while they were happening? (If you had more than one, give an average rating. If you didn't have any panic attacks but did have limited symptom attacks, answer for the limited symptom attacks.)	3	3	1
During the past week, how much have you worried or felt anxious about when your next panic attack would occur or about fears related to the attacks (for example, that they could mean you have physical or mental health problems or could cause you social embarrassment)?	4	3	1
During the past week were there any places or situations (e.g., public transportation, movie theatres, crowds, bridges, tunnels, shopping malls, being alone) you avoided, or felt afraid of (uncomfortable in, wanted to avoid or leave), because of fear or having a panic attack?	3	2	1

Are there any other situations that you would have avoided or been afraid of if they had come up during the week, for the same reason? If yes to either question, please rate your level of fear and avoidance this past week.			
During the past week, were there any activities (e.g., physical exertion, sexual relations, taking a hot shower or bath, drinking coffee, watching an exciting or scary movie) that you avoided, or felt afraid of (uncomfortable doing, wanted to avoid or stop), because they caused physical sensations like those you feel during panic attacks or that you were afraid might trigger a panic attack? Are there any other activities that you would have avoided or been afraid of if they had come up during the week for that reason? If yes to either question, please rate your level of fear and avoidance of those activities this past week.	4	2	1
During the past week, how much did the above symptoms altogether (panic and limited symptom attacks, worry about attacks, and fear of situations and activities because of attacks) interfere with your ability to work or carry out your responsibilities at home? (If your work or home responsibilities were less than usual this past week, answer how you think you would have done if the responsibilities had been usual.)	3	3	1
During the past week, how much did panic and limited symptom attacks, worry about attacks and fear of situations and activities because of attacks interfere with your social life? (If you didn't have many opportunities to socialize this past week, answer how you think you would have done if you did have opportunities.)	4	3	1
Total scores	25	19	7

Conclusion

Overall, these results suggest that alternative therapy with full-spectrum medical cannabis leaf extract tincture holds promise as a novel treatment approach for refractory social anxiety disorder and panic attacks. Further research is warranted to elucidate its mechanisms of action, optimise dosing regimens, and evaluate long-term safety and efficacy in larger clinical cohorts.

Acknowledgment

We, the Authors, acknowledge the Journal of Emerging Technologies and Innovative Research for the opportunity to submit our case report, “Treatment of Social Anxiety Disorder and Panic Attacks with Cannabidiol-Rich Full-Spectrum Medical Cannabis Leaf Extract Tincture.” All the authors of this paper reviewed and approved the final draft of the manuscript.

We ensure that our paper is original and authentic. Our case report explores the beneficial outcome of full-spectrum CBD oil for the treatment of social anxiety disorder (SAD). The patient showed a significant improvement in their social anxiety score, which decreased from 101 (very severe social anxiety) to 38 (mild social anxiety), which is a 62% decrease. This case report is a foundation for conducting such studies in a larger clinical cohort with patients diagnosed with SAD

References

1. Kessler RC, Stein MB, Berglund P. Social Phobia Subtypes in the National Comorbidity Survey. *Am J Psychiatry*. 1998 May;155(5):613–9.
2. Koyuncu A, İnce E, Ertekin E, Tükel R. Comorbidity in social anxiety disorder: diagnostic and therapeutic challenges. *Drugs Context*. 2019 Apr 2;8:1–13.
3. American Psychiatric Association, editor. *Anxiety disorders: DSM-5 selections*. Arlington, VA: American Psychiatric Association Publishing; 2015. 114 p.
4. Ameringen MV, Mancini C, Farvolden P, Oakman J. Drugs in development for social anxiety disorder: more to social anxiety than meets the SSRI. *Expert Opin Investig Drugs*. 2000 Oct;9(10):2215–31.
5. Cascade E, Kalali AH, Kennedy SH. Real-World Data on SSRI Antidepressant Side Effects. *Psychiatry Edgmont Pa Townsh*. 2009 Feb;6(2):16–8.
6. Ferguson JM. SSRI Antidepressant Medications: Adverse Effects and Tolerability. *Prim Care Companion J Clin Psychiatry*. 2001 Feb;3(1):22–7.
7. Habib G, Khazin F, Artul S. The Effect of Medical Cannabis on Pain Level and Quality of Sleep among Rheumatology Clinic Outpatients. Aloisi AM, editor. *Pain Res Manag*. 2021 Sep 6;2021:1–
8. García-Gutiérrez MS, Navarrete F, Gasparyan A, Austrich-Olivares A, Sala F, Manzanares J. Cannabidiol: A Potential New Alternative for the Treatment of Anxiety, Depression, and Psychotic Disorders. *Biomolecules*. 2020 Nov 19;10(11):1575.
9. Martin EL, Strickland JC, Schlienz NJ, Munson J, Jackson H, Bonn-Miller MO, et al. Antidepressant and Anxiolytic Effects of Medicinal Cannabis Use in an Observational Trial. *Front Psychiatry*. 2021 Sep 9;12:729800.
10. Rifkin-Zybutz R, Erridge S, Holvey C, Coomber R, Gaffney J, Lawn W, et al. Clinical outcome data of anxiety patients treated with cannabis-based medicinal products in the United Kingdom: a cohort study from the UK Medical Cannabis Registry. *Psychopharmacology (Berl)*. 2023 Aug;240(8):1735–45.
11. Mennin DS, Fresco DM, Heimberg RG, Schneier FR, Davies SO, Liebowitz MR. Screening for social

- anxiety disorder in the clinical setting: using the Liebowitz Social Anxiety Scale. *J Anxiety Disord.* 2002 Jan;16(6):661–73.
12. Furukawa TA, Katherine Shear M, Barlow DH, Gorman JM, Woods SW, Money R, et al. Evidence-based guidelines for interpretation of the Panic Disorder Severity Scale. *Depress Anxiety.* 2009 Oct;26(10):922–9.
13. Dahlgren MK, Lambros AM, Smith RT, Sagar KA, El-Abboud C, Gruber SA. Clinical and cognitive improvement following full-spectrum, high-cannabidiol treatment for anxiety: open-label data from a two-stage, phase 2 clinical trial. *Commun Med.* 2022 Nov 2;2(1):139.
14. Mishra V, Puri A, Sharma K. The effect of full-spectrum cannabis leaf extract on pain, inflammation, and quality of sleep: Case series. *J Integr Med Res.* 2024 Apr;2(2):91–6.
15. Vilaplana-Pérez A, Pérez-Vigil A, Sidorchuk A, Brander G, Isomura K, Hesselmark E, et al. Much more than just shyness: the impact of social anxiety disorder on educational performance across the lifespan. *Psychol Med.* 2021 Apr;51(5):861–9.
16. Katzelnick DJ, Kobak KA, DeLeire T, Henk HJ, Greist JH, Davidson JRT, et al. Impact of Generalized Social Anxiety Disorder in Managed Care. *Am J Psychiatry.* 2001 Dec;158(12):1999–2007.
17. Fliegel DK, Lichenstein SD. Systematic literature review of human studies assessing the efficacy of cannabidiol for social anxiety. *Psychiatry Res Commun.* 2022 Dec;2(4):100074.
18. Linge R, Jiménez-Sánchez L, Campa L, Pilar-Cuellar F, Vidal R, Pazos A, et al. Cannabidiol induces rapid-acting antidepressant-like effects and enhances cortical 5-HT/glutamate neurotransmission: role of 5-HT_{1A} receptors. *Neuropharmacology.* 2016 Apr;103:16–26.
19. Soares VDP, Campos AC, Bortoli VCD, Zangrossi H, Guimarães FS, Zuardi AW. Intra-Dorsal periaqueductal gray administration of cannabidiol blocks panic-like response by activating 5-HT_{1A} receptors. *Behav Brain Res.* 2010 Dec;213(2):225–9.
20. Campos AC, Guimarães FS. Involvement of 5HT_{1A} receptors in the anxiolytic-like effects of cannabidiol injected into the dorsolateral periaqueductal gray of rats. *Psychopharmacology (Berl).* 2008 Aug;199(2):223–30.
21. Furmark T, Appel L, Michelgård Å, Wahlstedt K, Åhs F, Zancan S, et al. Cerebral Blood Flow Changes After Treatment of Social Phobia with the Neurokinin-1 Antagonist GR205171, Citalopram, or Placebo. *Biol Psychiatry.* 2005 Jul;58(2):132–42.
22. Crippa JAS, Derenusson GN, Ferrari TB, Wichert-Ana L, Duran FL, Martin-Santos R, et al. Neural basis of anxiolytic effects of cannabidiol (CBD) in generalized social anxiety disorder: a preliminary report. *J Psychopharmacol (Oxf).* 2011 Jan;25(1):121–30.
23. Childs E, Lutz JA, De Wit H. Dose-related effects of delta-9-THC on emotional responses to acute psychosocial stress. *Drug Alcohol Depend.* 2017 Aug;177:136–44.
24. Papagianni EP, Stevenson CW. Cannabinoid Regulation of Fear and Anxiety: an Update. *Curr Psychiatry Rep.* 2019 Apr 27;21(6):38.

Abbreviations

SAD: Social Anxiety Disorder
SSRI: Selective Serotonin Reuptake Inhibitors
5-HT: Serotonin
MC: Medical Cannabis
ECS: Endocannabinoid System
CB1: Cannabinoid 1
CB2: Cannabinoid 2
5-HT1A: Serotonin 1A
AYUSH: Ayurveda, Yoga, Unani, Siddha, and Homeopathy
MCT: Medium-Chain Triglyceride
LSAS: Liebowitz Social Anxiety Scale
PDSS: Panic Disorder Severity Scale
CBD: Cannabidiol
rCBF: regional Cerebral Blood Flow
THC: tetrahydrocannabinol
2-AG: 2-arachidonoylglycerol

