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Case Report

The application of mindfulness-based cognitive therapy as an adjunctive therapy to alleviate depressive symptoms in post-stroke patients: a case report

Budhi Hami Seno[1]*, Joko Susanto[2], Wijaya Kusuma[1]

[1]Department of Staff of Psychiatry, Faculty of Medicine, Universitas Sebelas Maret, Surakarta, Indonesia
[2]Department Program of Psychiatry, Faculty of Medicine, Universitas Sebelas Maret, Surakarta, Indonesia

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***Correspondence:**
Dr. Budhi Hami Seno,
E-mail: budhihamis@yahoo.com

ABSTRACT

This case report explores the application of mindfulness-based cognitive therapy (MBCT) as an adjunctive therapy to alleviate depressive symptoms in post-stroke patients. Stroke is a major global health issue, leading to significant mortality and long-term disability. Post-stroke depression (PSD) is a common complication that negatively impacts recovery and quality of life. This study aims to understand the effectiveness of MBCT in managing PSD in a patient at RSUD Dr. Moewardi. Ny. SH, a 54-year-old housewife, experienced severe depression following a stroke. Her depressive symptoms were compounded by personal challenges, including a tumultuous relationship with her husband. Over eight MBCT sessions, the patient engaged in various mindfulness exercises designed to enhance present-moment awareness and develop healthier coping mechanisms. The sessions focused on building rapport, linking thoughts and emotions, confronting negative experiences, and integrating learned techniques into daily life. The patient reported significant improvements in mood, reduced depressive symptoms, and better coping strategies. Her Hamilton depression rating scale (HDRS) score decreased, indicating a reduction in the severity of her depression. The findings suggest that MBCT can be an effective adjunctive therapy for managing depression in post-stroke patients, improving mental health through structured mindfulness and cognitive therapy techniques. This case underscores the potential benefits of MBCT in enhancing recovery and quality of life for stroke survivors. Further research is needed to standardize MBCT procedures and explore its broader application in clinical settings.

Keywords: Cognitive therapy, Depression, Mindfulness, Stroke

INTRODUCTION

Stroke is 2nd leading cause of death globally and major cause of long-term disability.[1,2] Global burden of stroke is immense, with 10.3 million new cases annually and 113 million disability adjusted life years (DALYs).[3] Prevalence of stroke is estimated at 62 million worldwide, projected to increase to 77 million by 2030. Stroke results in approx. 5.7 million deaths annually, with 87% occurring in low- and middle-income countries.[4]

PSD is a common and serious residual symptom, leading to high mortality, disability, and recurrence rates. Complications of stroke, such as depression, anxiety, fatigue, apathy, and insomnia, often overlap.[5-8] These complications reduce quality of life and increase burden on families and communities. Depression negatively impacts functional outcomes and is strongly associated with higher mortality.[5]

A study in Scotland on multimorbidity reported that 21% of a national sample of 1.8 million people experienced depression.[9] Systematic reviews show that 33% of stroke survivors suffer from depression, with anxiety rates between 20-25%.[10] Known vascular risk factors account for only half of cerebrovascular disease risk, highlighting

the importance of psychosocial factors such as stress. Research has linked psychological stress to increased stroke risk.[11,12]

Stroke patients often experience emotional disturbances due to changes in daily activities and independence.[13] Negative experiences can lead to ineffective coping mechanisms, such as self-blame and hopelessness.[14] Recovery is influenced by both external factors, like family support, and internal factors, such as patient motivation and awareness.[13,15] Effective stroke recovery requires patient knowledge and self-awareness.[16]

Mindfulness, a well-researched aspect of consciousness, has been shown to improve well-being by fostering present-moment awareness and reducing negative psychological symptoms. It helps patients manage their illness more effectively by promoting acceptance and preventing harmful behaviors.[17,18]

MBCT has the potential to improve PSD by encouraging patients to explore and accept their emotions, leading to healthier coping strategies. MBCT could be promoted as a participatory psychotherapy, enhancing internal resources for better health outcomes.[19]

Given high prevalence and impact of PSD, this study aims to establish standardized procedure using MBCT as an adjunctive therapy for depression management in post-stroke patients at RSUD Dr. Moewardi. The goal is to understand relationship between mindfulness and illness behavior in these patients, contributing both theoretical and practical knowledge to field of health science.

CASE REPORT

This case report describes the application of MBCT in treating severe depression in a post-stroke patient, Ny. SH, a 54-year-old housewife from Boyolali.

Patient background

Ny. SH is a 54-year-old female with a middle school education, working as a housewife, residing in Boyolali. She is married with two children who are both married and live separately. She has a history of severe depression, with a HDRS score of 21 and a national institutes of health stroke scale (NIHSS) score of 15. She was diagnosed with post-stroke infarction due to embolism two months ago and has been on medications including citicoline 2×500 mg, candesartan 1×16 mg, miniaspi 1×80 mg, and amlodipine 1×10 mg. MBCT was administered as per protocol.

Medical and psychosocial history

The patient experienced significant emotional and psychological distress post-stroke, exacerbated by her recent remarriage to a husband who frequently gambled, drank, and was often absent from home. Her depressive symptoms included sadness, sleep disturbances, low self-esteem, and feelings of helplessness. She also reported frequent conflicts with her husband, which aggravated her depressive state.

Treatment and intervention

Session 1: Initial assessment and psychoeducation

The initial session involved building rapport, collecting comprehensive medical and psychosocial history, and conducting subjective and objective depression assessments using HDRS and NIHSS. Psychoeducation on MBCT was provided, emphasizing its role in managing PSD.

Session 2: Linking thoughts and emotions

The second session focused on connecting thoughts and emotions. The patient was guided through mindfulness breathing exercises and a body scan meditation. She practiced recognizing automatic negative thoughts and their impact on emotions.

Session 3: Gathering scattered thoughts

In the third session, the patient practiced mindfulness breathing and sitting meditations, emphasizing the observation of thoughts as transient mental events. Exercises included mindfulness in daily activities and maintaining a pleasant experiences calendar.

Session 4: Approaching unpleasant experiences

The fourth session addressed avoiding and escaping unpleasant experiences. The patient was trained to confront negative emotions mindfully and engage in mindful walking. Techniques for managing automatic negative thoughts were reinforced.

Session 5: Weakening aversion

The fifth session focused on weakening the aversion to negative experiences by accepting and observing them without judgment. The patient practiced regular and responsive 3-minute breathing spaces, identifying early warning signs of depression, and engaging in emotion-focused meditation.

Session 6: Viewing thoughts as mental events

The sixth session emphasized seeing thoughts as mere mental events. The patient practiced regular mindfulness exercises and learned to differentiate between thoughts and facts, thereby reducing their emotional impact.

Session 7: Developing an action plan

The seventh session involved integrating the learned techniques into a cohesive action plan for ongoing

support. The patient identified activities that uplifted her mood and developed strategies for dealing with stressors.

Session 8: Sustaining and expanding mindfulness practice

In the final session, the patient created a continuation plan for her mindfulness practice, identifying triggers for negative emotions and placing reminders for mindfulness exercises. She reported improved relationships and reduced conflicts with her husband.

Outcomes

Throughout the MBCT sessions, the patient reported significant improvements in mood, reduced depressive symptoms, and better coping strategies for dealing with stress and negative emotions. Her HDRS score decreased, indicating a reduction in the severity of her depression.

DISCUSSION

The application of MBCT as an adjunctive therapy to alleviate depressive symptoms in post-stroke patients is a topic of considerable interest in the field of mental health and rehabilitation. PSD is a common and debilitating condition that can significantly hinder the recovery process and overall quality of life for stroke survivors. Traditional treatments for PSD often include pharmacotherapy and conventional cognitive-behavioural therapy (CBT), but these methods may not be sufficient for all patients. This is where MBCT, a therapeutic approach that combines cognitive therapy with mindfulness practices, presents a promising alternative.[20,21]

MBCT is designed to help individuals develop a greater awareness of their thoughts and feelings, allowing them to disengage from patterns of rumination and negative thinking that can perpetuate depressive symptoms. By incorporating mindfulness practices such as meditation and body scans, MBCT encourages patients to focus on the present moment and cultivate a non-judgmental acceptance of their experiences. This approach can be particularly beneficial for post-stroke patients, who may struggle with feelings of loss, frustration, and hopelessness as they adjust to changes in their physical and cognitive abilities.[22,23]

Several studies have indicated that MBCT can be an effective adjunctive therapy for reducing depressive symptoms in post-stroke patients. Research suggests that MBCT not only alleviates depression but also enhances overall well-being and quality of life. For instance, a randomized controlled trial conducted by Wang et al found that post-stroke patients who participated in an MBCT program showed significant improvements in depressive symptoms, compared to those who received standard care alone. These findings are consistent with the broader literature on MBCT, which has demonstrated its efficacy in treating depression and preventing relapse in various populations.[24]

One of the strengths of MBCT is its focus on empowering patients with self-management skills. By learning to observe their thoughts and emotions without immediate reaction, post-stroke patients can develop a more adaptive coping style, which may help them navigate the challenges of recovery more effectively. Additionally, the group format of MBCT provides a supportive environment where patients can share their experiences and feel less isolated in their struggles.[25]

However, the implementation of MBCT in clinical settings does present some challenges. For instance, post-stroke patients may have physical or cognitive impairments that make it difficult to engage in mindfulness practices. Adaptations to the standard MBCT program may be necessary to accommodate these limitations, such as shorter session durations, simplified instructions, and the inclusion of caregivers in the therapy process. Moreover, the success of MBCT largely depends on the skill and experience of the therapist, highlighting the need for specialized training and supervision.[22,25]

CONCLUSION

MBCT proved effective in managing severe depression in this post-stroke patient, providing a structured approach to improving mental health through mindfulness and cognitive therapy techniques. This case underscores the potential benefits of MBCT as an adjunctive treatment for depression in post-stroke patients.

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