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Tandospirone for Trauma-Related Nightmares in Adolescents: A Case Series with Preliminary Quantitative Findings

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ABSTRACT

Background: Trauma-related nightmares and nocturnal re-experiencing symptoms are common in adolescents exposed to school-related stressors, including interpersonal difficulties and academic pressure [1,2]. Pharmacological options remain limited, particularly in terms of tolerability. While current treatments mainly target the noradrenergic system, serotonergic approaches have been less explored [3,4].

Methods: We conducted a retrospective case series of adolescents presenting with trauma-related symptoms, including nightmares and nocturnal awakenings. Inclusion criteria were the presence of trauma-related symptoms, sleep disturbances, and treatment with tandospirone. Clinical outcomes were assessed based on changes in nightmare frequency, dreaming intensity, nocturnal awakenings, and subjective sleep quality.

Results: A total of ≥15 adolescents were included. Approximately 70% of patients reported complete remission of trauma-related nightmares, while 90% experienced a reduction in excessive or vivid dreaming. Nocturnal awakenings decreased in most cases. Tandospirone was used as monotherapy or adjunctively, commonly in combination with benzodiazepines or antidepressants. About 20% of patients reported mild next-day dizziness, with no other significant adverse effects observed.

Conclusions: Tandospirone may have potential benefits in reducing trauma-related nightmares and nocturnal symptoms in adolescents. These findings are preliminary and hypothesis-generating, and further controlled studies are warranted.

Introduction

Trauma-related nightmares and nocturnal re-experiencing symptoms are frequently observed in adolescents exposed to school-related stressors, including interpersonal disruption, academic pressure, and maladaptive educational environments [1,2]. These symptoms often manifest as recurrent distressing dreams, abrupt nocturnal awakenings, and heightened nighttime arousal, leading to significant impairment in sleep quality and daytime functioning [2]. Pharmacological interventions for trauma-related nightmares have primarily focused on modulation of the noradrenergic system, such as prazosin [3,4]. However, their use in adolescent populations may be limited by tolerability concerns, including hypotension and dizziness. In contrast, serotonergic agents—particularly 5-HT1A partial agonists—have received relatively little attention in this context [5].

Tandospirone, a 5-HT1A partial agonist widely used for anxiety disorders, has a favorable safety profile and minimal sedative effects [6]. Previous studies of related agents such as buspirone suggest potential benefits in trauma-related symptoms [7]. In our clinical practice, we observed that tandospirone may reduce trauma-related nightmares and nocturnal symptoms in adolescents. Here, we report a case series to describe these preliminary findings.

Methods

We retrospectively reviewed adolescent patients treated at our outpatient psychiatric clinic who presented with trauma-related symptoms, including recurrent nightmares and nocturnal awakenings.

Inclusion Criteria Were

Presence of trauma-related symptoms (e.g., nightmares, re-experiencing, hyperarousal); Sleep disturbance characterized by frequent nightmares or nighttime awakenings; Treatment with tandospirone during the clinical course. A total of ≥15 adolescents were included. Tandospirone was administered either as monotherapy or as an adjunct to existing pharmacological treatment, most commonly benzodiazepines or antidepressants.

Clinical Outcomes were Assessed Based on

Frequency of nightmares, Presence of excessive or vivid dreaming, Nocturnal awakenings, Subjective sleep quality. This study was conducted in accordance with institutional ethical standards. Due to the retrospective nature of the study, formal ethical approval and informed consent were waived.

Results

A consistent pattern of improvement was observed following the introduction of tandospirone. Approximately 70% of patients reported complete remission of trauma-related nightmares, while 90% experienced a reduction in excessive or vivid dreaming. Nocturnal awakenings decreased in most cases, accompanied by improved sleep continuity. These improvements were observed both in patients receiving tandospirone as monotherapy and in those receiving adjunctive treatment. In several cases, patients who continued to experience nightmares despite benzodiazepine use showed additional improvement after the introduction of tandospirone. In terms of tolerability, approximately 20% of patients reported mild next-day dizziness, while no other significant adverse effects were observed. Overall, these findings suggest a consistent trend toward improvement in trauma-related nocturnal symptoms following the introduction of tandospirone.

Clinical Vignette

A 14-year-old female developed significant maladjustment after transitioning to middle school, characterized by interpersonal conflict, academic stress, and increasing aversion to the school environment. She reported recurrent nightmares centered on school-related themes, often awakening abruptly with intense distress and expressing extreme statements such as wanting to "destroy the school." Following hospitalization, she was initiated on fluoxetine (20 mg/day). Due to persistent trauma-related nightmares, tandospirone (20 mg nightly) was added. Within 3 days, the frequency of nightmares began to decrease, and after 2 weeks, nightmares had largely resolved, accompanied by improved mood and reduced emotional reactivity.

Discussion

This case series suggests that tandospirone may have clinically meaningful effects in reducing trauma-related nightmares and nocturnal symptoms in adolescents. From a neurobiological perspective, tandospirone acts as a partial agonist at 5-HT1A receptors, which are implicated in emotional processing and fear circuitry [5]. Modulation of serotonergic activity may reduce amygdala hyperreactivity and enhance prefrontal inhibitory control, both of which are central to trauma-related symptomatology. Unlike prazosin, which primarily targets noradrenergic hyperarousal, tandospirone may exert its effects through modulation of emotional salience and affective processing [3,4]. This distinction may be particularly relevant in adolescents, whose trauma is often associated with social evaluative stress rather than life-threatening experiences. The observed additive effect of tandospirone in combination with benzodiazepines is also notable. While benzodiazepines may reduce general arousal, they do not consistently alleviate trauma-related nightmares. Tandospirone may provide complementary benefits by targeting underlying emotional and cognitive processing mechanisms [8].

Importantly, tandospirone was generally well tolerated, with only mild and transient dizziness reported in a minority of patients. These findings should be interpreted with caution given the limitations of the study design. Nevertheless, they raise the possibility that serotonergic modulation via 5-HT1A receptors may represent an alternative or complementary pathway to noradrenergic-based treatments for trauma-related nightmares, particularly in adolescent populations. Future prospective and controlled studies are needed to further validate these observations.

Clinical Implications

Tandospirone may offer a well-tolerated option for adolescents with trauma-related nightmares, particularly for those who do not respond adequately to conventional treatments or who experience adverse effects with noradrenergic agents. Its potential role as an adjunctive treatment also warrants further exploration.

Conclusion

Tandospirone may represent a promising and well-tolerated option for reducing trauma-related nightmares in adolescents. Further research is required to confirm these preliminary findings.

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Ethics and Consent to Participate

This study was reviewed by the Ethics Committee of Tongde Hospital of Zhejiang Province. Due to the retrospective nature of the study and the use of anonymized clinical data, the requirement for informed consent was waived.

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