

Tetany in the Shadow of Stress: Myth or Real Problem Among Young People?

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Abstract

This study explores how tetany is a multifactorial health disorder characterized by neuromuscular hyper-excitability that is often associated with electrolyte imbalance and psychosomatic stress.

The research focuses on youth, exploring both the physiological and psychological depths of the condition. Introducing real views of respondents aged 16-45 who experience tetanic symptoms, this paper identifies common triggers, coping mechanisms, and discrimination of medical and social understandings of this disorder. The important findings were that stress, emotional exhaustion, and electrolyte imbalance are major contributors.

Despite its frequency, tetany remains misunderstood by both patients and healthcare providers. This study highlights the importance of prevention, stress management, and therapeutic approaches.

Keywords: tetany; stress; neuromuscular hyper-excitability; electrolyte imbalance; psychosomatic stress

Introduction

Adolescents and young adults are increasingly exposed to stress and emotional overload that is often reflected in psychosomatic health issues. One of these psychosomatic issues, tetany, is characterized by neuromuscular hyper-excitability resulting in anxiety symptoms, muscle cramps, and paraesthesia.

Tetany is characterized by increased neuromuscular hyper-excitability that may lead to muscle cramps, trembling, dizziness, paraesthesia, fatigue, or hyperventilation.

Even though it is not considered to be life-threatening, it can significantly impact and reduce quality of life. Tetany has two sides – as a psychosomatic phenomenon or as a legitimate neurological disorder linked to electrolyte and mineral imbalances. The research aims to provide a comprehensive overview of tetany and evaluate its relevance among young adults and adolescents.

Literature review

Tetany is a condition associated with abnormal excitability of peripheral nerves and muscles. It is commonly linked to electrolyte imbalance, especially low levels of magnesium and calcium, but it may also occur because of hyperventilation and psychological stress (Steidl, 2002).

According to Cleveland Clinic (2022), tetany may manifest through muscle spasms, cramps, numbness, tingling sensations, and involuntary muscle contractions. In severe cases, symptoms can resemble panic attacks or neurological disorders, which often complicates diagnosis.

Magnesium plays an important role in nervous system regulation and muscle function. A deficiency of magnesium can increase neuromuscular excitability and contribute to symptoms associated with tetany (Steidl, 2002).

Hyperventilation is another commonly discussed factor in tetany syndrome. During stress or anxiety, individuals may breathe rapidly and excessively, leading to changes in blood pH and a decrease in ionized calcium levels. This physiological reaction can trigger tetanic symptoms such as tingling, dizziness, chest pressure, or muscle stiffness (Tóth, 2025).

Previous studies suggest that chronic stress and anxiety significantly contribute to psychosomatic disorders among adolescents and young adults. Stress-related conditions are becoming increasingly common due to academic pressure, social media influence, sleep deprivation, and emotional overload. Young people often experience symptoms that combine psychological distress with physical manifestations.

As stated by Krajčovičová (2024), tetany is a condition that affects the neuromuscular system and may cause symptoms such as muscle cramps, headaches, anxiety, stress, and poor sleep quality. She also points out the importance of diagnosis through blood tests and discusses possible coping mechanisms for people diagnosed with tetany.

Slovakiapharm (2024) states that tetany is a syndrome characterised by symptoms including muscle cramps, mainly affecting the face, tongue, hands and legs. It may be caused by electrolyte or mineral imbalances, stress or hyperventilation.

Szkanderová (2024) describes tetanic syndrome as a condition frequently connected to anxiety and emotional tension. Patients often report feelings of fear and exhaustion. In addition, the symptoms are sometimes underestimated because they are interpreted as purely psychological problems.

Medical diagnostic methods for tetany may include electromyography (EMG), blood testing, and neurological examination (Mayo Clinic, n.d.). However, diagnosis may take considerable time because symptoms overlap with anxiety disorders, panic attacks, and other neurological conditions.

Methodology

The research design was based on semi-structured interviews with 5 respondents (aged 16-45), from different life situations, who had been diagnosed with tetany syndrome. The interviews included ten core questions about symptoms, the diagnostic process, triggers, coping mechanisms, and social discrimination. Data were analysed through thematic content analysis, focusing on the responses of the respondents.

Before the interviews, all participants were informed about the purpose of the research and how their answers would be used. Participation in the interviews was voluntary, and respondents could choose not to answer any question. Respondents were anonymised by using numbers instead of their names, and no personal information was included. As one respondent was a minor (16 years old), legal guardian consent was obtained before their participation.

Results

Symptoms: Most respondents reported symptoms such as headaches, chest pain, nausea, exhaustion and muscle tension associated with tetany.

Triggers: Stress, emotional strain, enclosed or noisy spaces, and lack of rest were the most common triggers.

Diagnosis: Most respondents received the diagnosis within several months to two years after the first symptoms.

Coping strategies: Respondents adopted relaxation techniques, breathing exercises (using paper bags), magnesium supplementation, and physical activity.

Social discrimination: While some respondents reported understanding from family, others experienced scepticism and misunderstanding from both peers and healthcare professionals.

Advice for others: Common recommendations included listening to one's body, reducing stress, and accepting the diagnosis as manageable.

Table 1.
Results

	1 st attack	Symptoms	Time of diagnosis	Triggers	Coping methods
Respondent 1 (40)	at the age of 20	headaches, chest pain, exhaustion	2 years	stress, noisy places, anxiety	rest, sleep, minerals
Respondent 2 (43)	at the age of 27	heart palpitations, chest pain, nausea	a month	anxiety, exhaustion	rest, vitamins, minerals
Respondent 3 (30)	at the age of 24	hyperventilation, muscle tension	6 months	stress	magnesium, physical activity, sleep
Respondent 4 (16)	at the age of 15	headaches, muscle tension	2 months	stress, emotional strain, lack of rest	rest, supplements, physical activity
Respondent 5 (45)	at the age of 21	muscle tension, headaches, nausea	right away	stress, enclosed spaces	breathing exercises, relaxation techniques

Discussion

The findings of this study show that respondents experienced tetany through a combination of psychological and physical symptoms. Stress, exhaustion, anxiety, hyperventilation and lack of rest were identified as the main triggers associated with worsening symptoms. These findings are consistent with previous research by Szkanderová (2024) and Tóth (2025). Szkanderová (2024) emphasizes anxiety and emotional tension in relation to tetany, while Tóth (2025) explains that stress and hyperventilation are factors associated with tetanic symptoms.

The symptoms and triggers reported by respondents, including symptoms such as headaches, heart palpitations, muscle tension, nausea, or hyperventilation, and triggers as stress, anxiety, lack of sleep and exhaustion, correspond with the literature by Krajčovičová (2024) and Slovakiapharm (2024).

The coping mechanisms differed between respondents. Rest, minerals, physical activity, breathing exercises and relaxation were among the coping strategies. These findings support the research discussed by Cleveland Clinic (2022) and Krajčovičová (2024).

Another interesting finding was the importance of awareness. The respondents reported individual experiences with people around them. Some of them were supportive and understanding, while on the other hand some lacked empathy and underestimated their symptoms. These findings suggest that knowledge of tetany may influence how individuals experience their symptoms and the diagnostic process.

Overall, the findings of this study correspond with the literature reviewed, specifically the relationship between psychological and physical aspects, reported symptoms, potential triggers, and shared coping mechanisms. As a result, individuals may experience tetany in different ways and situations.

Limitations

This study has several limitations. One of the main limitations is the small number of respondents. The small number of respondents was due to limited awareness of tetany syndrome and the fact that many people may remain undiagnosed. Another limitation is the wide age range, from 16 to 45, which may result in differences in symptoms, diagnosis, or coping mechanisms. In addition, further research with a larger group of participants could provide a broader understanding of tetany syndrome.

Conclusion

Tetany syndrome may represent a real and underestimated health problem among young people, as the participants in this study experienced symptoms and received diagnosis during their adolescence or young adulthood. The findings represent the relationship between physiological and psychological aspects of person, when it comes to tetany. It may require medical and psychological approaches focusing on prevention, education, and stress management. Greater awareness and empathy toward affected individuals are necessary to remove the stigma surrounding tetany.

The findings of this study indicate that stress, anxiety, emotional strain, lack of rest, enclosed or noisy places, hyperventilation and electrolyte imbalance may be associated with tetanic symptoms.

The research highlights the importance of prevention, education of tetany and stress management. Better awareness among healthcare professionals, young people and society may contribute to a better understanding of tetany.

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