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Belly Dancer Syndrome in an 11-year-old Ethiopian Child: Case Report

Desalegn Mechal*, Miraj Murad, Abinet Takele and Muluken Birhanu
Department of Pediatrics and Child Health, College of Health Science, Arbaminch University, Arbaminch, Ethiopia

Abstract

Belly dancer dyskinesia is a rare and poorly understood neurological disorder characterized by involuntary, rhythmic, and often wave-like movements of the abdominal wall muscles, resembling the movements of a belly dancer.

In this case report, we describe the presentation, diagnosis, and management of belly dancer dyskinesia in an 11-year-old child. The condition is uncommon, particularly in paediatric patients, and the underlying pathophysiology remains poorly understood, making the diagnosis, primarily clinical and management, symptomatic.

The rarity of belly dancer dyskinesia, coupled with its enigmatic nature, underscores the importance of documenting cases, particularly in younger patients. Doing so not only enhances awareness among clinicians but also contributes to a broader understanding of the disorder, potentially guiding future research and treatment strategies.

Through this report, we aim to add to the limited body of literature on belly dancer dyskinesia and offer insights into its clinical course and management in paediatric patients.

Keywords: Belly dancer dyskinesia • Movement disorder • Clonazepam

Introduction

Dyskinesia limited to the axial musculature is an extremely rare phenomenon. When such dyskinesia involves the anterior abdominal wall, it is termed as Belly dyskinesia. The clinical characteristics usually include involuntary, repetitive, and often rhythmic movements of the anterior abdominal wall. These movements bear a striking resemblance to the undulating motions of a belly dancer, hence the name [1,2].

Although Belly dancer dyskinesia can affect individuals of any age, it is particularly uncommon in the paediatric population, making early recognition and diagnosis challenging [3].

The exact aetiology and pathophysiology of Belly dancer dyskinesia remain elusive, but BDD is often associated with a variety of underlying conditions, including nervous system disorders (peripheral or central), drug-induced, psychological, or idiopathic [3–6].

Unlike other movement disorders, which have well-defined structural or neurochemical abnormalities, BDD is often diagnosed on the basis of clinical presentation alone. This lack of clear pathophysiological understanding complicates the development of targeted therapies, leaving management focused primarily on symptomatic relief [7].

In this case report, we present an 11-year-old child with belly dancer dyskinesia, detailing the clinical presentation, diagnostic workup, and management approach. Through this report, we aim to contribute to the limited research on BDD and provide insights into its clinical progression in paediatric patients.

***Address for Correspondence:** Desalegn Mechal, Department of Pediatrics and Child Health, College of Health Science, Arbaminch University, Arbaminch, Ethiopia, Tel: 920174139, E-mail: desalegnmechal@gmail.com*

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Case Presentation

An 11-year-old male presented with a 5-day history of involuntary abdominal wall movements. The movements were described as nonprogressive, undulating contractions of the abdominal muscles that were visible to the naked eye. The movement disappears while the patient is sleeping and when he is pinched on his abdominal wall. He has no other associated symptoms.

The patient's past medical history was unremarkable, with normal developmental milestones and no previous neurological or gastrointestinal disorders. There was no family history of neurological conditions. The patient was not on any medications at the time of presentation.

Upon physical examination, the child was alert, active, and interactive during the clinical examinations. His saturation was normal, with no signs of respiratory distress.

Pulse rate, respiratory rate, and blood pressure were normal for his age.

The results of the neurological examination revealed rhythmic contractions of the abdominal muscles, and the movements were involuntary and could be temporarily suppressed by pinching the abdominal wall but resumed shortly afterward No other abnormalities were noted on the neurological or systemic examination.

Given the unusual presentation, a comprehensive workup was undertaken. Blood tests, including a complete blood count, electrolytes, and liver function tests, were all within normal limits. Brain magnetic resonance imaging was normal

Given the absence of an identifiable neurological or structural abnormality, a diagnosis of belly dancer dyskinesia was made on the basis of clinical presentation.

The patient and his family were counseled on the nature of the disorder and the likelihood of resolution or improvement with treatment and follow-up.

After a discussion of treatment options, including pharmacological and nonpharmacological approaches, the patient was started on a low dose of clonazepam.

At the 1-month follow-up, the patient reported a significant reduction in the frequency and severity of abdominal movements. Clonazepam was well tolerated, with no side effects reported. The patient continued to participate

in physical therapy.

At 6 weeks after initiation of treatment, there was no longer abdominal wall movement. Thus, clonazepam is tapered, and further follow-up is planned to monitor his progress.

Discussion

Although Belly dancer dyskinesia is a rare condition, particularly in paediatric patients, it remains a poorly understood neurological disorder [3,4]. The case of an 11-year-old child presented in this report illustrates the diagnostic challenges and complexities involved in managing such an uncommon condition.

The clinical presentation of Belly dancer dyskinesia in this case was typical, with the child exhibiting involuntary, rhythmic, and wave-like movements of the abdominal wall. These movements disappear during sleep and distraction (pinching the child's abdominal wall), which is a common feature in many cases of BDD. The absence of associated neurological deficits or other systemic symptoms further supported the diagnosis [1,2,4,8].

The diagnosis of Belly dancer dyskinesia is primarily clinical and relies on the characteristic appearance of the movements. The lack of specific biomarkers or definitive imaging findings makes it essential for clinicians to be familiar with the condition and to approach it with a high index of suspicion when encountering unexplained abdominal movements [5,6,9].

While it is classified as a movement disorder, the exact mechanisms underlying abnormal muscle activity are not well understood [3,4].

The management of Belly dancer dyskinesia is challenging because of the lack of a clear understanding of its aetiology and the absence of standardized treatment protocols. In this case, a combination of pharmacological and nonpharmacological approaches was employed, reflecting the need for a tailored treatment plan [7].

Pharmacological interventions: The use of clonazepam in this case provided total symptomatic relief, which is consistent with its effectiveness in reducing muscle spasms in other movement disorders [4].

Behavioural and psychological interventions: While not extensively detailed in this case, cognitive–behavioural therapy can be a beneficial component of the treatment plan, targeting the stress and anxiety that appeared to trigger or exacerbate the abdominal movements in some reported cases.

Physical therapy: Physical therapy focusing on muscle control and relaxation techniques can be beneficial in managing Belly dancer dyskinesia. Strengthening exercises for the abdominal muscles and home exercise programs may help reduce the frequency and severity of involuntary movements [4-10].

The prognosis of Belly dancer dyskinesia varies widely among patients. In many cases, the condition may persist for years, with fluctuating severity. The effectiveness of treatment also varies, with some patients responding well to therapy and others experiencing only partial relief. Long-term management often requires ongoing multidisciplinary care, with adjustments to the treatment plan on the basis of the patient's response and any changes in symptoms.

In paediatric patients, the impact of Belly dancer dyskinesia on daily activities, school performance, and social interactions must be carefully monitored. Early intervention with appropriate therapies is crucial for minimizing the long-term impact of the disorder on the child's development and quality of life [1,3,6–8,10].

Conclusion

This case of belly dancer dyskinesia in an 11-year-old child illustrates the challenges in diagnosing and managing this rare disorder. The favourable outcome with low-dose clonazepam and physical therapy suggests that a similar approach may be beneficial in other paediatric cases, although further research is needed to better understand the condition and optimize treatment strategies.

Ethical Approval

This case report was conducted in accordance with institutional guideline for case reports, and informed consent was obtained from the patient's parents. Formal ethical approval was not required.

Consent to Publish

The child's parents has provided written informed consent for the publication of this case report. The parents has been assured that personal identity will be kept confidential, and that no identifying information will be disclosed in the report.

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Availability of Data and Materials

The data and materials used in this case report are available from the corresponding author upon reasonable request.

Acknowledgement

None.

Conflict of Interest

None.

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