



Chronic Pain, Social Withdrawal, and Anxiety: A Case Study in Pediatric Pain

Management

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Abstract

This case study examines a 12-year-old boy, suffering from significant chronic abdominal pain accompanied with anxiety and social withdrawal which had negative effects on his academics and quality of life. An eclectic approach was employed, incorporating Cognitive-Behavioral Therapy (CBT), psychoeducation, family engagement and educational support. Through tailored strategies, Alex acquired skills to counteract maladaptive thoughts and effectively cope with his pain and anxiety. Results indicated notable advancements in pain perception, emotional control, and social involvement, underscoring the relevance of addressing the psychological facets of chronic pain. This case enhances the comprehension of effective pediatric chronic pain treatments and highlights the need for ongoing investigation into multidisciplinary approaches that could improve therapeutic results for similarly affected children.

Keywords: *Chronic Abdominal Pain, Anxiety, Depression, Cognitive-Behavioural Therapy, Paediatric Care*

Introduction

A common and complicated ailment in children, chronic abdominal pain (CAP) frequently affects a child's emotional, social, and academic development. Children often have co-occurring symptoms of anxiety, sadness, and sleep difficulties in addition to physical discomfort, demonstrating the complex interaction between chronic pain and psychosocial issues. Benegal et al. (2024) pointed out that meal-related symptoms, which are typical in young people with CAP, frequently make these mental health issues worse, indicating a reciprocal interaction between emotional and physical symptoms. Since pain can occur without apparent organic causes, CAP is sometimes categorized as a primary chronic pain illness. These complications highlight the difficulties in identifying and treating CAP (Friedrichsdorf et al., 2016).

The relationship between psychological traits including neuroticism and emotional dysregulation and the intensity and duration of chronic pain in young people has drawn more attention in recent years. Children who exhibit greater levels of neuroticism and poor emotional regulation are more likely to experience CAP and associated mental health issues, particularly when they are under chronic stress or trauma, as demonstrated by Ruiz-Guillén et al. (2024). In a comparable direction, Rouch et al. (2023) discovered that personality factors and early traumatic experiences predict the persistence of chronic pain, highlighting the necessity of thorough biopsychosocial evaluations in these situations. Since anxiety and depression are frequent comorbidities, the emotional toll that chronic illness takes on children makes managing CAP much more challenging. Edbor et al. (2023) reported that depression is common among children with chronic diseases, particularly when symptoms interfere with normal

functioning and increase isolation from others. Altered interoception, or the awareness of interior physiological sensations, has also been found as a possible relationship between chronic pain and mental health issues, resulting to increased pain sensitivity and emotional dysregulation (Hechler, 2021).

Psychosocial variables and age are also important in the onset and course of CAP. In accordance with Jones et al. (2020), children's abdominal pain gets worse as they get older and is closely linked to psychological stresses, indicating that pain experiences are influenced by social and developmental circumstances. Non-pharmacological strategies including biofeedback and cognitive-behavioural therapy have been investigated more and more as supplemental therapies for pediatric CAP as a result of the increased awareness of these factors (Santos et al., 2022).

Case Formulation

Alex, a 12-year-old boy, was referred for specialist educational and psychological care due to severe, chronic abdominal pain that had serious psychosocial and academic consequences. Alex was raised in a loving home, but his chronic illness has strained relationships and restricted his social interactions. His clinical symptoms include continuous abdominal pain, particularly after meals, as well as anxiety, depression, and significant social disengagement. These challenges have severely impacted Alex's everyday functioning, causing him to be absent from substantial parts of school and limit interactions with others, further exacerbating his isolation and lowering his self-esteem.

Medically, Numerous diagnostic tests, such as imaging, blood work, and endoscopy, were performed on Alex, but none of them were able to identify an organic source of his pain. He was therefore identified with a primary chronic pain disease, specifically functional abdominal pain. His illness was complex and non-organic, as evidenced by the limited relief that previous

interventions, including dietary changes and pharmaceutical treatments, provided. His energy and tolerance for everyday tasks have also been diminished as a result of his sleep issues, which include frequent awakenings linked to increased anxiety and discomfort.

Psychosocially, Alex had become much more isolated from his peers and his academic performance had declined as a result of his chronic pain. His parents were concerned about his growing disengagement from family life, and his instructors noted that even on days when he goes to school, he seemed exhausted and upset. In addition to his chronic pain, the social disengagement made him feel less valuable and more anxious in public places, where he worried that he might experience unexpected pain episodes.

Mental status Examination (MSE)

Appearance: appeared younger than stated age; underweight with poor posture; dishevelled appearance.

Behavior: limited eye contact; appears anxious and fidgety, displays minimal engagement during interaction.

Speech: Coherent but often monosyllabic; slowed rate

Cognition: Oriented to time, place, and person; intact attention, though with frequent worry-related thoughts.

Insight and judgment: Limited insight into own emotions; judgment impaired in social contexts, difficulty regulating emotions, particularly under stressful situations.

Tests Administered

Screen for Child Anxiety Related Disorders: revealed high levels of social and generalized anxiety that are especially noticeable when he expects pain. Further suggesting A strong correlation between anxiety and pain.

The Children's Depression Inventory (CDI): indicated mild depression symptoms, which were mainly characterized by feelings of hopelessness, social disengagement, and decreased interest in activities. When taken as a whole, these evaluations show that Alex's chronic pain not only causes stress but is probably made worse by it.

The Faces Pain Scale-Revised (FPS-R): was employed to measure his level of pain, and Alex frequently rated his pain between 6 and 8 on a 10-point scale, particularly in situations that made him anxious or after meals.

Catastrophizing Scale for Children (PCS-C): revealed significant rumination and helplessness related to his pain, suggesting that negative thought patterns might exacerbate his psychological distress and prolong his pain experience.

Therapeutic Approach

Alex's complicated presentation of depression, anxiety, and persistent abdominal pain prompted the incorporation of a comprehensive treatment planning to address his psychological and physical health. The following strategies were applied:

Cognitive-Behavioral Therapy (CBT): To identify and restructure negative thinking patterns associated with his pain and anxiety; Alex took part in individual CBT sessions. Through cognitive restructuring techniques, he practiced recognizing negative thoughts linked to his pain and rephrasing them into more positive viewpoints. Exposure therapy was one of the behavioral strategies used to help Alex interact more completely with peers and lower his anxiety. He started with smaller groups and increased his understanding of social interactions gradually.

Pain Management Education: Alex was given psychoeducation about the characteristics of chronic pain and how it interacts with emotions. He gained knowledge about the relationship between the mind and body as well as how worry may intensify pain. He was

taught mindfulness practices including deep breathing exercises and guided imagery to help him develop present-moment awareness and lower his stress levels. Furthermore, he received instruction in relaxation techniques, such as progressive muscle relaxation, to help him regulate his anxiety and pain and feel more in charge of his health.

Family Involvement: To enhance communication and support within the home, family therapy sessions were implemented once it was seen how Alex's chronic pain affected family relations. Family members received skills training throughout these sessions, with an emphasis on active listening and confirming Alex's experiences. To create a more empathetic atmosphere and decrease feelings of loneliness, the family also engaged in scenarios to practice supportive reactions to Alex's pain episodes.

School-Based Support: Schedules that met Alex's academic requirements and social reintegration were made possible through coordination with his school. In order to accommodate flare-ups, a customized education plan was created that featured flexible attendance rules and, when needed, less homework. In order to promote Alex's involvement in school life and assist him in forming sustaining friendships, peer support programs were also put into place. These included buddy systems and group activities intended to establish social bonds.

Outcome

Alex showed considerable improvements in a number of areas during the therapy sessions, including his academic performance, social behavior, psychological well-being, and pain perception. In the short term, Alex reported that the frequency and severity of his episodes of abdominal pain had decreased throughout the first three months of treatment. A 20% improvement in scores on the Screen for Child Anxiety Related Disorders (SCARED) indicates that anxiety levels significantly decreased along with this drop in pain perception.

Socially, Alex's interactions with peers became more active. After initially being hesitant to join in group activities, he progressively became more involved in school-related events and social activities. He had a significant improvement in social engagement and a decrease in feelings of loneliness at the conclusion of the intervention period, reporting that he enjoyed interacting with peers and taking part in group discussions.

His psychological well-being significantly improved, as seen by the significant improvement in his depressed symptoms. Depressive symptoms decreased from moderate to mild levels, as shown by scores on the Children's Depression Inventory (CDI), which were marked by enhanced self-esteem and heightened interest in activities. Alex's improved capacity to express his emotions and suffering experiences was another indication of this positive change, indicating improved emotional control.

Academically, he made a significant improvement in his performance. Teachers saw that he was able to finish homework more regularly and that he was more engaged and present in class. In terms of participation and comprehension, his academic performance was evaluated by teachers, who noted that he was more attentive and less distracted in class.

Clinically, the treatment team emphasized Alex's resilience and dedication to the therapy process. The eclectic approach, notably the combination of CBT, psychoeducation, and family participation, was identified as critical to his improvement. The clinicians saw that Alex's capacity to use mindfulness practices during painful episodes demonstrated a rising feeling of agency and self-efficacy.

Discussion

This case presents an example of how difficult it may be to manage Chronic abdominal pain when depression and anxiety are present. These comorbid disorders were successfully treated by a multidisciplinary therapy strategy that combined Cognitive-Behavioral Therapy

(CBT), psychoeducation, family participation, and school-based assistance. This is consistent with studies that highlight the value of holistic approaches to treating chronic pain in children (Friedrichsdorf et al., 2016; Santos et al., 2022).

CBT was essential to Alex's recovery because it helped him reframe unhelpful cognitive patterns associated with his discomfort. Alex changed the outlook on his illness from one of helplessness to one of empowerment by using cognitive restructuring techniques. Theoretical frameworks that emphasize the part cognitive assessment plays in pain perception lend validity to this strategy (Hechler, 2021). Furthermore, the psychoeducation element equipped Alex with information about the mind-body link, which improved his capacity to control anxiety and comprehend the connection between emotional elements and pain perception (Benegal et al., 2024).

Despite the significant advantages of the intervention, there were challenges, especially in the early stages of exposure treatment when Alex was reluctant to interact with others. He did, however, progressively gain social comfort as his therapy progressed, underscoring the value of patience and steady exposure in therapeutic approaches. Future iterations of the intervention might incorporate peer support programs early to better alleviate feelings of loneliness.

Ruiz-Guillén et al. (2024) found that neuroticism and emotional control had an influence on mental health prospects in children with chronic illnesses, and Alex's development is consistent with their findings. According to these research, emotional regulation-focused therapies like mindfulness and cognitive restructuring can result in notable psychological gains. Additionally, Alex's improved social engagement and academic performance support Jones et al.'s (2020) claims that attending to psychosocial aspects is essential for the well-being of children with chronic pain.

Future studies should examine the long-term effectiveness of interdisciplinary methods in more varied and sizable pediatric groups in order to improve generalizability. Important new information may be obtained from longitudinal research examining the relationship between neuroticism, emotional control, and the consequences of chronic pain. Researching early treatments that promote emotional resilience and social support may also help to enhance treatment approaches and results for children with similar issues.

Conclusion

This Case highlights the intricate connection between children's anxiety, depression, and persistent abdominal pain, underscoring the necessity of a comprehensive treatment strategy. Alex's pain perception, emotional regulation, and academic performance all significantly improved as a result of the intervention's successful treatment of his psychological needs and physical symptoms through the integration of Cognitive-Behavioral Therapy, psychoeducation, family involvement, and school-based support. The present case demonstrates the value of tailored approaches that take into account family dynamics and individual psychological profiles, which is consistent with previous studies on the advantages of social support and emotional control in the treatment of chronic pain in children.

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