SAGE Open Medical Case Reports
Volume 11: 1–4

DOI: 10.1177/2050313X231179304
journals.sagepub.com/home/sco
Sage

The comorbidity of somatic symptom and major depressive disorders in the times of COVID-19 lockdown in adolescence: A case-report study

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Abstract

Physical symptoms with normal clinical examinations have been reported without detectable structural or biochemical abnormalities in the comorbidity of somatic symptom disorder and major depressive disorder. This association can have a debilitating effect on their academic and social performance. This case report is about a 13-year-old Afghani immigrant boy with no previous psychiatric history who developed severe body pain leading to a disability during the COVID-19 lockdown and social isolation. During further evaluation, all his clinical examinations were normal, and the diagnosis of major depressive disorder and somatic symptom disorder was confirmed. Cognitive behavioral therapy includes cognitive therapy, changing lifestyle, and a motivational support method. Medical treatment with olanzapine, fluvoxamine, and gabapentin was started. During follow-up, there was improvement in the patient's mood, and the patient began to walk and communicate. It is important to suspect an association of somatic symptom disorder and major depressive disorder in patients with severe body pain and multiemotional factors. Psychiatrists should keep in mind that emotional factors can play a significant role in causing and maintaining physical symptoms.

Keywords

Somatic symptom disorder, major depressive disorder, COVID-19 lockdown, psychiatric disorder, migration

Date received: 11 January 2023; accepted: 12 May 2023

Background

Somatic symptom disorder (SSD) and major depressive disorder (MDD) are two psychiatric diseases diagnosed with various clinical presentations and examination that lead to functional impairment and disability. Identifying these two diseases based on their common and overlapping symptoms can lead to misdiagnosis.[1]

In SSD, there are medically inexplicable physical complaints, and our patient experienced physical symptoms. However, there is no apparent physical pathology. These unwanted complaints in the context of emotional problems appear as physical symptoms. On clinical examination and investigation, no structural or biochemical abnormalities were found to explain the physical symptoms, and the lack of treatment could have a negative impact on academic and social outcomes. Invasive, expensive, and unnecessary diagnostic procedures are also commonly performed in these cases.[2]

Depressive disorder is characterized by suffering from depressive feelings or sadness. The early onset of depressive disorder in children and adolescents often leads to behavioral and physical complaints, masks the symptoms of depression, and often goes undetected or untreated. Complaints of depression in children and adolescents may present as depressed

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mood, chronic sadness or loss of interest, withdrawal from social settings, changes in sleep-wake patterns, and frequent complaints of unexplained physical pain.[3]

Tu et al.[5] reported that patients with SSD were found to have high comorbidity rates with MDD. Löwe et al.[4] mentioned in their review article that the prevalence of MDD is high in a patient with SSD, and the severity of SSD is related to the severity of MDD. The overlap and comorbidity of these diseases make treatment difficult and costly for the public.[4,5]

The studies mentioned that these diseases are defenses of the unconscious from emotional regulation disturbances, and several factors can influence disturbances in emotions and triggering. Interpersonal factors proposed to be essential in developing emotional regulation disturbances in SSD and MDD continue to trigger and maintain the psychosomatic symptoms in life.[5–7]

Because of airborne transmission of COVID-19 and the associated high mortality rate, to control the infection, lockdown policies and social isolation were implemented by governments. As a consequence, the regular medical appointments, medicine distribution, and follow-up of the patients are disrupted. Iran was one of the first countries affected by the COVID-19 pandemic, and it was considered a country with a high mortality rate in some periods. The spread of the COVID-19 pandemic and lockdown devastated an individual's mental and social health in Iran. Psychiatric disorders were more prevalent during the lockdown (1.54 times) than in the post-lockdown period, and there was a positive correlation between lockdown and the incidence of depressive disorder ($p < .001$).[8,9]

In this study, we discussed a 13-year-old Afghan boy who complained of generalized body pain and symptoms of depression and was misdiagnosed with fibromyalgia. He did not respond to treatment; therefore, his diagnosis of SSD and MDD were confirmed in further evaluation.

Case presentation

We present a case of a 13-year-old adolescent of Afghan ethnicity, a single male, who was referred to a child and adolescent psychiatry clinic in northeast Iran with chronic and generalized pain. Six months earlier, the patient's pain gradually increased in the lumbar region and spread to all body parts. The pain was mainly in the patient's lower limbs and back. The patient could not walk independently and used a cane a month ago. The pain did not wake him up, but he did not respond to outpatient treatments such as non-steroidal anti-inflammatory drugs. The patient's daily activities were impaired as he could not maintain an active lifestyle due to pain and depression. His pain was not aggravated by cold, physical activity, or prolonged inactivity. He has no medical or psychiatric history and denied any history of suicide attempts and substance abuse. His family history was also negative.

On physical examination, vital signs were within normal limits. Examination of 12 cranial nerves was normal. The force, tone, and deep tendon reflexes of muscles were normal. In addition, tests of the cerebellum (finger to nose and gait) were normal.

First, due to generalized pain, he was examined by a pediatrician, and his physical examination and initial laboratory test were normal. Therefore, computed tomography scan and magnetic resonance imaging of the spine were ordered to exclude any internal disorder, which came back negative. Then, based on the normality of the relevant examinations and tests, the patient was referred to a psychiatrist for psychological assessment.

During the psychiatrist's visit, the patient was casually dressed, and his hygiene was good, but he did not maintain enough eye contact. He was partially cooperative but sufficiently able to provide a good history with the support of his father. He said he had generalized body pain, trouble sleeping, and was constantly fatigued. The patient also mentioned a history of anorexia, loss of sleep and interest, and easy crying during this period. The patient had not slept enough and went to sleep late at night and woke up early in the morning. His content and speech stream were normal, but his speech velocity was slow.

Due to the COVID-19 pandemic and lockdown policies, patient's access to physicians and medical treatment has been limited. Furthermore, as a result of the lockdown, a restriction in communication with friends and relatives along with living in a foreign country led to social isolation. The patient feared being in the community due to the dread of contracting COVID-19 and national lockdown restrictions. In addition, considering the economic crisis caused by the COVID-19 pandemic, the concern of being under financial pressure also led to the aggravation of his symptoms.

His mood was slightly depressed, and his affect tended to be dysphoric but remained congruous with the thought content. The patient showed no signs of anxiety, delirium, paranoia, or hallucinations. The patient wished for death because of the persistent extreme pain in the absence of suicidal ideas. He did not appear impaired on a cognitive basis, with both recent and remote memories preserved. Orientation to the person was evaluated by asking about identifying the patient's companions, the therapist, and the medical students. Orientation to the place was confirmed by asking about the home address and the treatment clinic location. Orientation to time was investigated by asking about the date and time of the interview. The evaluation of the patient's orientation to space, person, and time was normal. The patient showed poor insight and judgment regarding his condition and needed help.

The patient was born into a family with a low socioeconomic level. Due to fleeing from the war in his hometown and observing the death of his loved ones during the war, he suffered a lot of emotional injuries. On the other hand, moving to a new country with different cultural values and lacking familiarity with his

classmates at school have caused more tension. The patient's parents were often busy with work and did not spend much time with him; therefore, he usually spent his time alone. The aforementioned reasons have been influential factors in his condition.

The low socioeconomic status and insufficient information to refer to the right doctor prolonged the patient's diagnosis process. Nevertheless, after the final evaluation, according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition,[9] guidelines, SSD and MDD were confirmed based on his psychiatric history and examination. The patient had severe symptoms of SSD and did not experience the major symptoms of MDD, including anhedonia and low mood. With the Child Behavior Checklist (CBCL) diagnostic tool and clinical interview, a psychometric examination was performed, and he filled in both criteria for MDD and SSD.[10]

The psychiatrist started olanzapine 2.5 mg daily, fluvoxamine 50 mg daily, and gabapentin 300 mg twice daily. In addition, cognitive behavioral therapy (CBT) was performed. After 2 weeks of treatment, the teenager started walking without a cane, and his depressed mood improved. So, we increased his medication, and he was on olanzapine 5 mg daily, fluvoxamine 100 mg daily, and gabapentin 300 mg twice daily. After a month, he could laugh, his pain subsided, and his depression was treated.

After medical treatment and CBT therapy, the CBCL test was repeated, and improvement in the symptoms of SSD and MDD was reported. Also, the clinical interview was re-done, the clinical symptoms were re-examined, and their advancement was utterly evident. A psychiatrist observed this change in behavior and improvement in mood, and the patient gradually started to walk and communicate with others.

Our patient was scheduled for a twice-weekly follow-up visit for evaluation. During the 8-week follow-up, with weekly CBT, the patient was in remission. During this period, the patient's depression and bone pain were cured. He comes back for a monthly checkup.

Discussion

In this study, we presented a 13-year-old boy who suffered from considerable muscle pain for so long that he gradually became unable to walk. The patient presented with various physical, psychosomatic, and depressive symptoms. Due to the chronic misdiagnosing of the disease, the patient's life was disrupted, and there were direct and indirect costs. Finally, according to the normality of tests and examinations, the diagnosis of SSD and MDD was confirmed.

Studies have mentioned that in the comorbidity of SSD and MDD, emotion dysregulation plays an essential role in developing, progressing, and treating symptoms. Our patient was of Afghan ethnicity and migrated to Iran 7 months earlier to escape the Afghanistan war. We presumed the first emotional stress was escaping from the war. The patient was influenced by the war and related events, which significantly contributed to the occurrence of emotional disorders. Scenes of death, stress, anxiety, and violence can be effective in the incidence of mental disorders. A study by Riad et al.[7] reported that emotional instability, stress, anxiety, trauma, and depression are commonly observed after the war and are more prevalent in children and adolescents.[8,9,11,12]

Second, pressures from a new school, country, and culture and being away from his family and friends developed emotional stress for our patient. A study by Foo et al.[13] mentioned that adapting to new environments and cultural practices can lead to significant stress levels, which in turn is related to manifestations of mental disorders. Evidence for a definite causal relationship among migration, acculturation stress, and subsequent development of depression appears to be arbitrary.[13,14]

Third, the symptoms of our case presented during the COVID-19 pandemic, which was challenging for people because of fear of the disease's gravity and absence of proper treatment, prolonged social isolation, and financial burden, especially for migrated people. This emotional stress increases the risk of developing a psychiatric disorder in a patient with underlying mental health problems. According to a study by Chacko et al.[15] and Roeh et al.,[16] prolonged social isolation with minimal human contact during the COVID-19 pandemic caused exacerbation of psychological diseases and suicidal behavior.

Managing this patient was challenging because of the comorbidity of SSD and MDD. We treated our patient with olanzapine, fluvoxamine, and gabapentin and performed CBT, and the patient's response to treatment was excellent.

CBT is a proven treatment that addresses negative perceptions that contribute to emotional distress and, in turn, can heal stress-related physical symptoms. Therapeutic strategies to modify these negative perceptions can reduce emotional distress and related somatic symptoms. In a study by Hofmann et al.[17] and Ghanizadeh and Firoozabadi,[18] it was mentioned that CBT effectively treats children with somatoform disorders, which can reduce anxiety and somatic symptoms.

Conclusion

Awareness of the interplay between psychosocial stressors and somatic symptoms is needed to improve the functional status of patients with multiple somatic symptoms. Without early intervention, it can lead to unnecessary tests and ineffective treatment, thus worsening the patient's condition. Therefore, understanding and early diagnosis of SSD and MDD are essential. After excluding organic causes, anxiety and other emotional factors of persistent somatic symptoms in children should be identified and treated promptly with the help of pediatric specialists.

Authors' contributions

N.S. provided advice for the case report study. M.M. gathered patient's medical and health records. N.L. wrote the first draft of the manuscript, and all authors commented on previous versions. All authors read and approved the final manuscript.

Availability of data and material

The data sets used during the current study are available from the corresponding author on reasonable request.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Ethical approval and consent to participate

Written informed consent was obtained from the patient's legal guardian for publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal. The purpose of this case report was completely explained to the patient and his legal guardian, and they were assured that his information would be kept confidential by the researchers. This case report was performed in line with principles of the declaration of Helsinki.

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References

1. Johnson B. Somatic symptom disorders in children. *BMH Med J* 2017; 4(2): 55–61.
2. Colizzi M, Bortoletto R, Silvestri M, et al. Medically unexplained symptoms in the times of COVID-19 pandemic: a case-report. *Brain Behav Immun Health* 2020; 5: 100073.
3. Bedard-Thomas KK, Bujoreanu S, Choi CH, et al. Perception and impact of life events in medically hospitalized patients with somatic symptom and related disorders. *Hosp Pediatr* 2018; 8: 699–705.
4. Löwe B, Levenson J, Depping M, et al. Somatic symptom disorder: a scoping review on the empirical evidence of a new diagnosis. *Psychol Med* 2021; 52: 1–7.
5. Tu CY, Liu WS, Chen YF, et al. Is severity a clinically meaningful specifier of somatic symptom disorder? *J Psychosom Res* 2020; 133: 110108.
6. Cozzi G, Minute M, Skabar A, et al. Somatic symptom disorder was common in children and adolescents attending an emergency department complaining of pain. *Acta Paediatr* 2017; 106(4): 586–593.
7. Riad A, Drobov A, Krobot M, et al. Mental health burden of the Russian–Ukrainian war 2022 (RUW-22): anxiety and depression levels among young adults in central Europe. *Int J Environ Res Publ Health* 2022; 19(14): 8418.
8. Lashkarbolouk N, Mazandarani M, Pourghazi F, et al. How did lockdown and social distancing policies change the eating habits of diabetic patients during the COVID-19 pandemic? A systematic review. *Front Psychol* 2022; 13: 1002665.
9. Zakeri MA, Maazallahi M, Ehsani V, et al. Iranian psychosocial status during and after COVID-19 outbreak mandatory quarantine: a cross-sectional study. *J Commun Psychol* 2021; 49(7): 2506–2516.
10. Achenbach TM. The child behavior checklist and related instruments. In: Maruish ME (ed.) *The use of psychological testing for treatment planning and outcomes assessment*. Mahwah, NJ: Lawrence Erlbaum Associates Publishers, 1999, pp. 429–466.
11. American Psychiatric Association. *Diagnostic and statistical manual of mental disorders: DSM-5*. 5th ed. Washington, DC: American Psychiatric Association, 2013.
12. Güney ZEO, Sattel H, Witthöft M, et al. Emotion regulation in patients with somatic symptom and related disorders: a systematic review. *PLoS ONE* 2019; 14(6): e0217277.
13. Foo SQ, Tam WW, Ho CS, et al. Prevalence of depression among migrants: a systematic review and meta-analysis. *Int J Environ Res Publ Health* 2018; 15(9): 1986.
14. Güney ZEO, Sattel H, Cardone D, et al. Assessing embodied interpersonal emotion regulation in somatic symptom disorders: a case study. *Front Psychol* 2015; 6: 68.
15. Chacko M, Job A, Caston F, et al. COVID-19-induced psychosis and suicidal behavior: case report. *SN Compr Clin Med* 2020; 2(11): 2391–2395.
16. Roeh A, Kirchner SK, Malchow B, et al. Depression in somatic disorders: is there a beneficial effect of exercise? *Front Psychiatry* 2019; 10: 141.
17. Hofmann SG, Asnaani A, Vonk IJ, et al. The efficacy of cognitive behavioral therapy: a review of meta-analyses. *Cognit Ther Res* 2012; 36(5): 427–440.
18. Ghanizadeh A and Firoozabadi A. A review of somatoform disorders in DSM-IV and somatic symptom disorders in proposed DSM-V. *Psychiatr Danub* 2012; 24(4): 353–358.