

Can Suspected Bornholm Disease Present with Somatic-Like Symptoms? A Case Report Highlighting Diagnostic Challenges in Patients with Somatic Symptom Presentations

Gaurav Uppal^{1*}, Raghu Rattan², Advait Dhar³, Bandubai Muhammed Kalam⁴, Rupesh Gyaneshwar Enagandula⁵, Yoseph Kale⁶

¹Consultant psychiatrist, Satyam Hospital Ludhiana, India

²Consultant psychiatrist, Umeed Psychiatry Clinic Bilaspur, India

³Consultant Psychiatrist, Sanjeevani Manorog Clinic, Una, India

⁴Consultant Psychiatrist, Nalagarh Manorog Hospital, Nalagarh, India

⁵Consultant Psychiatrist, Ekta Hospital, Patiala, India

⁶Consultant Psychiatrist, Manipal Hospital, Patiala, India

*Correspondence to: Gaurav Uppal, Consultant psychiatrist, Satyam Hospital Ludhiana, India, E-mail: drgauravuppal@gmail.com

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ABSTRACT

Somatic symptom disorder is often marked by persistent physical complaints, which may be associated with an underlying organic illness, and may also be a major diagnostic concern. We present a case of a 55-year-old woman with hypothyroidism and a 25-year history of intermittent generalized pain, beginning at the age of 30 years and exacerbated by a major financial stressor 3 years prior to presentation. The symptoms were pain in the upper limbs and lower back, tremors, palpitations and autonomic arousal. Orthopedic and neurologic examinations revealed only degenerative spinal changes that seemed disproportionate to her symptoms.

In September 2017 she developed sudden onset of left-sided pleuritic chest pain associated with low-grade fever and lymphocytosis. Extensive workup by cardiology, neurology, surgery, medicine and orthopedics ruled out major alternative diagnoses. Computed tomography of the chest showed a minimal pleural effusion. Pleural fluid analysis revealed a transudative fluid. Sputum testing for tuberculosis was negative. Virological confirmation was not available; however, the clinical presentation and exclusion of other causes led to a clinical diagnosis of suspected Bornholm disease. She was treated with corticosteroids, antibiotics, and ongoing psychiatric medications and showed marked improvement in one week.

This case emphasizes the need for detailed re-evaluation in such patients with known somatic symptoms. A multidisciplinary approach is essential to avoid diagnostic overshadowing and ensure timely recognition of organic disease.

Keywords: Somatic Symptom Disorder; Bornholm Disease; Pleurodynia; Chronic Pain; Case Report

INTRODUCTION

Somatic symptom presentations remain one of the most challenging areas in both clinical psychiatry and general medical practice. Patients frequently present with persistent physical symptoms that are either medically unexplained or are disproportionate to identifiable pathology, often leading to diagnostic uncertainty and therapeutic difficulty [1,2]. Across diverse cultural and health-care settings, somatic symptom disorders are highly prevalent in outpatient departments and are associated with repeated consultations, excessive investigations, and increased health-care utilization [3-5].

These presentations become particularly complex when genuine organic illness coexists with long-standing somatic symptom disorder, thereby obscuring diagnostic clarity and sometimes delaying recognition of underlying medical conditions [6].

Epidemiological studies suggest that up to one-third of physical symptoms reported in primary care cannot be fully explained by identifiable organic pathology [7,8]. Women are more likely than men to report somatic symptoms, and strong associations exist between somatic symptoms, anxiety disorders, and depressive disorders (9,10). Patients with chronic pain syndromes frequently experience overlapping

symptoms such as fatigue, palpitations, autonomic arousal, and emotional distress, making it difficult to distinguish between primary psychiatric disorders and underlying medical conditions [11,12].

Somatoform pain disorder, now subsumed under somatic symptom disorder in contemporary diagnostic systems such as the DSM-5, represents a particularly challenging clinical entity [13]. Patients typically report persistent, distressing pain that is not fully explained by medical evaluation and is often associated with significant functional impairment [14]. Management requires a multidisciplinary approach involving pharmacological treatment, psychotherapy, psychoeducation, and structured follow-up [15]. However, a major clinical dilemma arises when patients with long-standing somatic symptom disorder present with new or worsening symptoms that may indicate an underlying organic pathology. In such situations, clinicians must carefully balance the risks of premature psychological attribution against unnecessary over-investigation [16].

Psychosocial stressors play a crucial role in the onset and exacerbation of somatic symptoms. Factors such as financial difficulties, interpersonal conflicts, chronic illness, and major life events can precipitate or worsen somatic complaints [17]. These stressors are thought to increase autonomic arousal and enhance central pain sensitivity, leading to heightened perception of bodily sensations [18,19]. Neurobiological models suggest that chronic stress alters central pain processing pathways, thereby contributing to symptom amplification and persistence [20].

The presence of comorbid medical illness further complicates the clinical picture. Conditions such as hypothyroidism, degenerative spine disease, viral infections, and inflammatory disorders may coexist with psychiatric conditions and contribute to symptom burden [21]. In such cases, a purely psychiatric or purely medical explanatory model is insufficient; instead, an integrated biopsychosocial approach is essential for accurate diagnosis and management [22].

Bornholm disease, also known as epidemic pleurodynia, is a relatively rare viral illness most commonly caused by Coxsackie B virus [23]. It is characterized by the sudden onset of severe chest or upper abdominal pain, often accompanied by fever and respiratory discomfort. The pain is typically sharp, intermittent, and exacerbated by breathing or movement [24]. Although generally self-limiting, the condition can mimic serious medical emergencies such as myocardial infarction, pulmonary embolism, pleurisy, and intercostal neuralgia, frequently leading to extensive investigations before diagnosis is established [25,26].

Outbreaks of Bornholm disease have been reported in clusters and epidemics, particularly in tropical and subtropical

regions [27]. The condition may be underdiagnosed due to its self-limiting course and lack of specific diagnostic markers in routine clinical practice [28]. Furthermore, atypical presentations may occur in elderly individuals and in patients with pre-existing chronic pain or somatic symptom disorders [29]. In such cases, new-onset chest pain may be misattributed to anxiety, somatization, or functional pain syndromes, resulting in misdiagnosis or delayed recognition of the underlying infection [30].

The relationship between viral infections and somatic symptom disorders is an emerging area of clinical interest. Viral illnesses can produce a wide spectrum of symptoms, including fatigue, pain, fever, and autonomic disturbances [31]. In patients with pre-existing somatic symptom disorder, these manifestations may be misinterpreted as exacerbations of psychiatric illness rather than indicators of new organic pathology [32]. This diagnostic challenge is particularly relevant in resource-limited settings and in contexts where psychiatric diagnoses carry significant stigma [33].

The present case report describes a 55-year-old woman with a long-standing history of somatic symptoms who developed acute onset chest pain subsequently suspected to be Bornholm disease. This case highlights the importance of careful reassessment in patients with chronic somatic symptom presentations and underscores the need for close collaboration between psychiatrists and physicians to avoid missing underlying organic illness [34]. It also raises important clinical questions regarding the differentiation of somatic symptom exacerbation from new medical pathology and emphasizes the critical role of a multidisciplinary, biopsychosocial approach in complex diagnostic scenarios [35].

Recent evidence has further emphasized that Somatic Symptom Disorder should be approached using an integrated biopsychosocial framework rather than a diagnosis of exclusion. Early multidisciplinary intervention with collaboration between psychiatrists and physicians has been shown to improve patient outcomes while reducing unnecessary investigations and healthcare utilization [36,37]. Another important concept is diagnostic overshadowing, in which new physical symptoms are wrongly attributed to an existing psychiatric disorder, resulting in delayed recognition of concurrent medical illness [38]. Thus, clinicians are prompted to re-evaluate patients whenever their symptoms change in character, severity or anatomical location rather than assuming progression of the underlying psychiatric condition [39]. Epidemic pleurodynia as an important differential diagnosis of acute pleuritic chest pain, especially after exclusion of serious causes, is emphasized in recent reviews of enteroviral infections [40,41].

CASE REPORT

Time	Clinical Event
Age 30 years	Onset of intermittent generalized body pain involving the upper limbs and lower back
3 years before presentation	Major financial stressor followed by worsening of pain and anxiety symptoms

Initial psychiatric assessment	Diagnosed with Somatic Symptom Disorder after multidisciplinary evaluation
Initial treatment	Amitriptyline, pregabalin, short-term benzodiazepines, and psychosocial interventions
Follow-up	Significant clinical improvement with regular psychiatric follow-up
Sep-17	Sudden onset of left-sided pleuritic chest pain with low-grade fever
Diagnostic workup	Evaluation by cardiology, neurology, medicine, surgery, and pulmonology
Imaging	CT chest demonstrated minimal pleural effusion; pleural fluid was transudative
Clinical diagnosis	Suspected Bornholm disease after exclusion of alternative causes
Management	Supportive treatment, corticosteroids, antibiotics, and continuation of psychiatric medications
Outcome	Rapid resolution of chest pain within one week; remained clinically stable on follow-up

Table 1: Timeline of clinical events

History of Presenting Illness

A 55-year-old woman presented to the psychiatry outpatient department with a long-standing history of generalized body pain, intermittent tremors, palpitations, and anxiety spanning over two decades. Her symptoms had significantly worsened over the preceding three years, particularly following a major financial stressor.

The patient reported that her symptoms began at approximately 30 years of age, initially as mild, intermittent, dull-aching pain involving the upper limbs and lower back. Over time, the pain gradually progressed in severity and became persistent and functionally disabling, interfering with daily activities. Following the aforementioned psychosocial stressor, she developed additional symptoms including intermittent tremors, palpitations, restlessness, heightened health anxiety, and frequent health-care consultations.

She was a known case of hypothyroidism and was receiving treatment with levothyroxine. There was no history suggestive of major depressive disorder, psychotic illness, or substance use.

The patient had previously consulted multiple specialties, including orthopedics and neurology. Radiological evaluation revealed age-appropriate degenerative changes of the spine, which were considered disproportionate to the severity of her reported pain. Neurological examination and laboratory investigations were largely unremarkable, apart from elevated thyroid-stimulating hormone levels consistent with hypothyroidism.

A comprehensive psychiatric evaluation revealed persistent preoccupation with physical symptoms, excessive health-related anxiety, and significant distress associated with somatic complaints. Based on these findings, a diagnosis of Somatic Symptom Disorder with predominant pain was made in accordance with DSM-5 criteria.

Mental Status Examination at Initial Presentation

The patient appeared anxious, with a preoccupied focus on physical health concerns. Her mood was anxious, and affect was congruent. There was no evidence of perceptual abnormalities, delusional beliefs, or formal thought disorder. Cognitive functions were intact. Insight was partial, as the patient acknowledged a possible role of stress but continued to attribute symptoms primarily to physical illness.

Physical Examination and Initial Workup

Vital signs were within normal limits. Neurological examination revealed no focal deficits. Radiological imaging demonstrated age-appropriate degenerative spinal changes. Routine laboratory investigations were within normal limits, except for elevated thyroid-stimulating hormone levels, for which she was receiving treatment.

Initial Management and Clinical Course

The patient was initiated on amitriptyline 100 mg daily and pregabalin 150 mg at night. Short-term benzodiazepines were prescribed for symptomatic relief of anxiety. In addition, she received psychoeducation, supportive psychotherapy, and relaxation-based interventions.

Over the following months, the patient showed significant clinical improvement, with reduction in pain severity, decreased health-related anxiety, and improved functional status. She was able to resume routine daily activities and remained clinically stable for approximately one year.

Subsequent Presentation (September 2017)

Approximately one year later, the patient presented with a sudden onset of severe, localized pain in the left lower chest region. The pain was described as sharp and “shock-like” in nature, markedly different from her previous diffuse somatic complaints. It was exacerbated by breathing, coughing, and physical movement. This was associated with low-grade fever.

Mental Status Examination at Re-presentation

On reassessment, the patient appeared anxious with increased somatic focus on the newly developed chest pain. However, there was no evidence of suicidal ideation, psychosis, or cognitive impairment.

Physical Evaluation and Multidisciplinary Assessment

Given the atypical nature and acute onset of symptoms, a comprehensive multidisciplinary evaluation was undertaken involving cardiology, neurology, general medicine, pulmonology, and surgical teams. Cardiac and neurological causes were systematically excluded through appropriate investigations.

Based on the clinical presentation of pleuritic chest pain, associated fever, and supportive findings including pleural involvement, a provisional diagnosis of viral pleurodynia (Bornholm disease) was considered.

INVESTIGATIONS

The patient presented with acute left-sided pleuritic chest pain and underwent a detailed multidisciplinary assessment involving cardiology, general medicine, pulmonology, neurology, surgery and orthopaedics. Electrocardiogram (ECG) did not show any acute ischemic changes. Cardiac causes were suspected to be unlikely. Cardiac biomarkers (troponin) were normal. A complete blood count showed lymphocytosis and the rest of the routine laboratory tests were normal.

Chest CT showed a small amount of pleural effusion on the left side. Diagnostic pleural fluid tap revealed transudate, and sputum for *Mycobacterium tuberculosis* was negative. No other infectious, cardiac, neurologic, or surgical cause was found to explain the patient's symptoms. Viral serology or polymerase chain reaction (PCR) testing for enteroviruses/Coxsackie virus was not available and laboratory confirmation of Bornholm disease could not be achieved.

Basis of the Diagnosis of Bornholm Disease

Diagnosis of suspected Bornholm disease (epidemic pleurodynia) was made on clinical grounds after exclusion of other possible causes. The patient presented with sudden onset of left sided pleuritic chest pain associated with low grade fever and lymphocytosis, pain exacerbated by respiration and movement. Imaging showed minimal pleural involvement with no evidence of an alternative diagnosis. Cardiac, neurological, surgical and pulmonary emergencies were systematically excluded by a multidisciplinary evaluation. The patient was clinically improved rapidly after supportive therapy and corticosteroid therapy which is consistent with the self-limiting nature of Bornholm disease. Virological confirmation was not available and diagnosis was presumptive based on characteristic clinical presentation and exclusion of competing diagnoses.

Management and Outcome

The patient was managed symptomatically with analgesics, a short course of corticosteroids, and antibiotics. Her ongoing psychiatric medications were continued without modification.

She demonstrated rapid clinical improvement, with resolution of chest pain within one week and subsidence of fever. On psychiatric reassessment, there was no evidence of exacerbation of her underlying somatic symptom disorder.

At discharge, she was maintained on amitriptyline 100 mg, pregabalin 150 mg, and levothyroxine 25 mcg daily. She was advised regular follow-up with both psychiatry and pulmonology services. On subsequent follow-up, she remained clinically stable with no recurrence of acute symptoms.

RESULTS

The present case highlights several important clinical observations. First, the patient demonstrated significant improvement in chronic pain symptoms following psychiatric treatment. Second, the sudden onset of chest pain represented a distinct clinical event that differed in quality, location, and associated symptoms from her previous somatic complaints. Third, multidisciplinary evaluation played a crucial role in identifying the probable diagnosis.

Following initiation of amitriptyline and pregabalin, the patient experienced a substantial reduction in generalized body pain. The frequency of pain episodes decreased, and the intensity became manageable. Anxiety symptoms also improved, suggesting that pharmacological treatment combined with psychoeducation was effective in managing somatic symptom disorder.

The sudden onset of chest pain in September 2017 represented a new clinical presentation. Unlike her earlier symptoms, the pain was localized, sharp, and aggravated by breathing. The presence of low-grade fever further suggested an organic cause. Despite extensive evaluation by multiple specialities, no major cardiac or neurological pathology was identified.

The CT chest findings of minimal pleural effusion provided an important clue. Although the effusion was small and transudative, it indicated the possibility of an underlying inflammatory or viral process. The suspicion of Bornholm disease was based primarily on clinical features rather than laboratory confirmation.

After starting treatment with steroids and supportive care, the patient showed rapid improvement. The chest pain reduced significantly within one week, and the patient was able to resume normal breathing. This rapid response suggested that the symptoms were likely related to an acute medical condition rather than psychological worsening.

Another important observation was that the patient's psychiatric symptoms did not worsen during this episode. Instead, the improvement in chest pain led to a reduction in anxiety and health-related worries. This further supported the

presence of an underlying medical condition rather than a purely somatic presentation.

Overall, the results of this case demonstrate the importance of reassessing patients with somatic symptom disorder when new symptoms appear. The case also highlights the effectiveness of multidisciplinary management in complex clinical situations.

DISCUSSION

The present case highlights the diagnostic challenge of differentiating new organic disease from exacerbation of symptoms in patients with established somatic symptom disorder (SSD). Recent literature has highlighted the risk of diagnostic overshadowing in which new physical symptoms may be wrongly attributed to a pre-existing psychiatric disorder and the recognition of co-existing medical illness may be delayed (36,38). In our patient, sudden onset of pleuritic chest pain, low grade fever, lymphocytosis and small pleural effusion was significantly different from her previous chronic somatic symptoms and warranted a thorough multidisciplinary assessment. Bornholm disease (epidemic pleurodynia) is an uncommon clinical syndrome most commonly associated with the Coxsackie B virus and other enteroviruses, and usually presents with acute pleuritic chest pain, fever and a self limiting clinical course [24,29].

CONCLUSION

Clinicians should take a balanced biopsychosocial approach when evaluating patients with chronic somatic symptom presentations and be alert to novel or atypical features that may represent concurrent organic disease. A quick multidisciplinary reassessment and directed medical workup should be prompted by a sudden change in the quality or localization of the pain, systemic signs (fever, pleural findings), or poor response to psychotropic and psychosocial interventions. Close collaboration of psychiatry, internal medicine and specialties reduces diagnostic delay, prevents misattribution and allows for timely treatment of reversible conditions while continuing appropriate management of the underlying somatic symptom disorder.

Virological confirmation was not available but the characteristic clinical presentation, exclusion of alternative diagnoses and favourable clinical course supported a working diagnosis of suspected Bornholm disease. This case emphasizes the need for multidisciplinary reevaluation and being cautious against premature diagnostic closure in patients with chronic somatic symptom disorders presenting with new or atypical symptoms [22,36,37].

FUTURE DIRECTIONS

Future research should focus on understanding the relationship between somatic symptom disorder and viral infections. It is possible that viral illnesses may trigger worsening of somatic symptoms in some patients. Studies exploring this relationship may help improve diagnosis and treatment.

Another important area of research is the development of better diagnostic tools for somatic symptom disorder. Biomarkers, neuroimaging techniques, and psychological assessment tools may help differentiate between psychiatric and medical causes of symptoms.

Training programs for medical professionals should also emphasize the importance of recognizing somatic symptom disorder while remaining alert to the possibility of underlying medical illness. Improved awareness may reduce misdiagnosis and improve patient outcomes.

LIMITATIONS

This case report has several limitations. First, the diagnosis of Bornholm disease was based primarily on clinical features rather than laboratory confirmation. Second, the report describes a single patient, and the findings may not be generalizable to all cases of somatic symptom disorder. Third, the absence of long-term follow-up limits the ability to assess the persistence of symptoms. Despite these limitations, the case highlights an important clinical issue and emphasizes the need for careful evaluation in patients presenting with somatic symptoms. The diagnosis of Bornholm's disease remains presumptive as virology (PCR or serology for coxsackie B virus) could not be done.

CONSENT STATEMENT

The patient gave written informed consent for the publication of this case report and any accompanying images

CONFLICT OF INTEREST

The authors declare no conflicts of interest.

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