Case Report

Cardiac Angiofibrosarcoma in differential Diagnosis With Conversion Disorder: A Complicated Case

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ABSTRACT

A 28-year-old female patient without previous psychiatric hospitalization was presented with numerous physical and mental symptoms since one year ago. However, no physical illness was discovered during two hospitalizations, her physical examinations and multiple imaging tests. She was consulted by the psychiatric service on suspicion of conversion disorder. Finally, with further investigations, cardiac angiosarcoma was diagnosed and surgery was performed.

Diagnosis of conversion disorders has remained a clinical challenge. It is essential to gather a comprehensive psychiatric history and conduct detailed clinical examinations to pinpoint the exact symptom onset, identify stressors and assess comorbidities. The key to diagnosing conversion disorder is excluding other physical and neurological conditions. This case underscores that alongside considering a diagnosis of conversion disorder, the presence of physical issues should always be acknowledged and not overlooked during evaluation.

Keywords: Cardiac angiosarcoma, Conversion, Conversion disorder

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Introduction

Conversion disorder, also known as functional neurological symptom disorder, typically manifests as acute and transient loss or alteration of motor or sensory function. According to diagnostic and statistical manual of mental disorders, 5th edition (DSM-5), the diagnostic criteria for conversion disorders include one or more symptoms involving changes in sensory or motor nerve function that do not align with recognized patterns of psychological or medical conditions, resulting in occupational or social dysfunction or impacting other significant areas of a person's functioning [1].

Given that the onset of these symptoms often coincides with the presence of psychological issues (such as conflicts), early theorists believed that these problems manifested as neurological symptoms. As stress is a constant presence in life, identifying the primary stressor triggering symptoms in many patients with conversion disorder can be challenging [1].

The symptoms of conversion disorder commonly include blindness, deafness, psychogenic non-epileptic seizures, paralysis, swallowing difficulties, speech impairment, limb tremors, dystonia, syncope, numbness, and limb weakness [2-4].

Several conditions can exhibit symptoms resembling those of conversion disorder, such as neurological disorders (dementia and other degenerative diseases), brain tumors, basal ganglia diseases, myasthenia gravis, polymyositis, acquired myopathies, and multiple sclerosis, leading to weakness in the differential diagnosis of conversion disorder. Optic neuritis may also be mistaken for blindness associated with conversion disorder [1]. Heart tumors represent one of the rare physical diseases for which the differential diagnosis with conversion disorder has not been extensively discussed.

Cardiac tumors are typically categorized into two main types: Primary and secondary. Primary heart tumors are rare, with an incidence rate of <2%. Most of these tumors are benign, often myxomas [5]. Malignant tumors account for only about 25% of cardiac tumors, with 95% of these being sarcomas. Atrial spindle cell carcinoma is one of the rarest types of sarcomas, characterized by clinically aggressive neoplasms with a poor prognosis [6]. Both benign and malignant tumors generally present similar clinical symptoms. Depending on their precise location, they can manifest with a range of cardiopulmonary symptoms, such as chest discomfort, shortness of breath, palpitations, syncope, heart failure, pericardial effusion and tamponade, valvular abnormalities, or arrhythmias.

Additionally, they may cause non-specific symptoms like fever, chills, dizziness, loss of appetite, night sweats, weakness, lethargy, weight loss, and so on [5, 7, 8]. Given the similarity and overlap of symptoms between conversion disorder and medical conditions, diagnosis can be challenging and often necessitates thorough physical examinations. In this study, we delved into a complex case where a rare cardiac tumor mimicked the symptoms typically associated with conversion disorder.

Case Presentation

The patient was a 28-year-old married housewife with a level of education of less than a diploma. She had no history of prior psychiatric hospitalization and was experiencing functional dyspnea grade 2 and pressure headache. She was being treated with nortriptyline 25 mg once daily. About five months ago, her symptoms worsened, manifesting with increased weakness and fatigue, numbness and tingling in her limbs, weakness, and pain primarily in her upper limbs, which hindered her ability to carry out daily tasks. Consequently, she was admitted to the internal ward of a general hospital in Tehran City, Iran, in October 2022. Consultations with cardiologists and pulmonologists were made to further assess the patient's physical complaints. The echocardiogram and ECG results were reported as normal.

A CT scan of the lungs revealed signs of bilateral pleural effusion, nodules, and airspace opacities, raising suspicion of interstitial lung disease. A rheumatology consultation was sought, and various tests were conducted. Throughout the additional evaluations, potential rheumatological conditions, including Wegener granulomatosis, were considered and subsequently ruled out. The patient was discharged with recommendations to continue treatment measures and follow-up on an outpatient basis. A few months (approximately six months) after discharge, the patient's symptoms progressively deteriorated, characterized by heightened shortness of breath escalating to functional dyspnea grade 3, wheezing and Raynaud's syndrome.

Consequently, the patient was readmitted to the internal ward. Given the absence of definitive medical evidence to account for the limb pain and numbness that emerged post-conflict with her spouse and exacerbated alongside mental distress, a psychiatric consultation was

sought with suspicions of a potential diagnosis of functional neurological disorder and conversion disorder. During the psychiatric evaluation, it was revealed that the patient's psychiatric symptoms had initially surfaced over the past five years following her marriage. These symptoms included heightened sensitivity to her husband's behavior, obsessive thoughts, increased marital conflicts, heightened anxiety levels, sleep disturbances, and a persistent low mood. Regarding personality traits, the patient has exhibited high expectations from others, sensitivity to their behavior, a sense of responsibility, adherence to rules and regulations, commitment, an inclination towards cleanliness, orderliness, tidiness, and a tendency towards checking behaviors for many years. Based on the patient's mood symptoms, a diagnosis of major depressive disorder was established. Given the coexistence of unexplained physical symptoms alongside mood symptoms and conversion disorder, such as the onset of shortness of breath, severe weakness and fatigue, noticeable decline in performance, and CT scan evidence indicating lung involvement, the possibility of an underlying physical issue was also considered.

Consequently, the psychiatric team recommended further medical evaluations by the relevant healthcare providers. Additionally, a low dose of sertraline was suggested to manage the patient's psychiatric issues, relieving anxiety and depression. The day following the consultation, the patient experienced a sudden loss of consciousness, prompting a repeat emergency echocardiogram. A mass was detected in the patient's atrium, leading to an immediate decision for open-heart surgery. The excised mass was found to occupy a significant portion of the patient's left atrium (Figure 1). Initially, the mass's appearance raised suspicions of a myoma; however, the pathology results indicated cardiac angiosarcoma of the heart atrium. Subsequently, the patient was discharged in good overall condition, with the resolution of all physical symptoms, including shortness of breath, weakness, and fatigue, along with prescribed heart medications and recommendations for continued psychiatric follow-up visits. During subsequent appointments, the patient's mood symptoms had shown improvement. However, the heart pathology report revealed an invasive malignant tumor, suggesting a survival prognosis of less than one year. Consequently, the patient commenced chemotherapy, radiotherapy, and ongoing psychiatric treatment.

Discussion

Our patient presented a unique case involving a rare heart tumor, initially referred to the psychiatric ward under suspicion of conversion disorder due to insufficient evidence of physical illness. Diagnosing conversion dis-

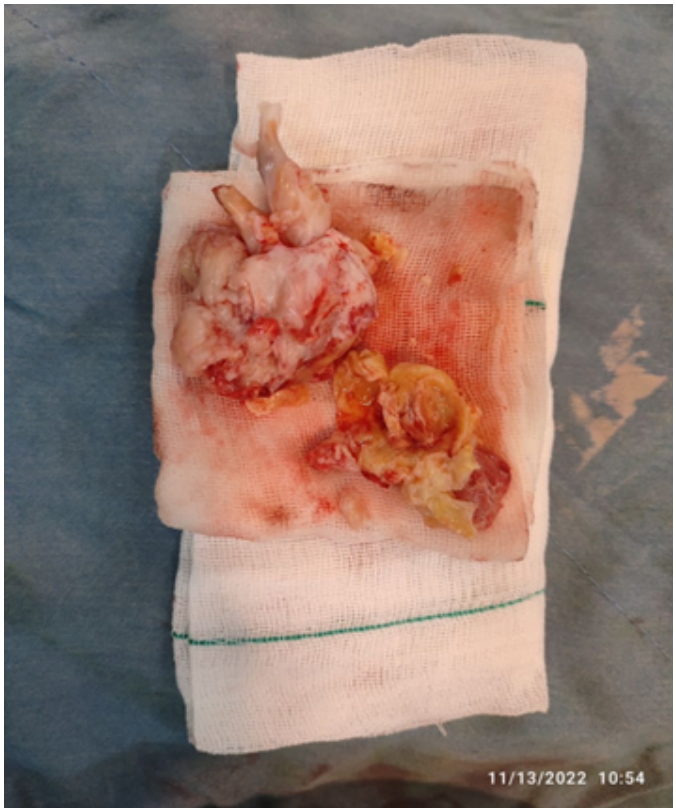

Figure 1. The excised heart tumor from the patient

orders continues to pose a clinical challenge. It is imperative to gather a comprehensive psychiatric history and conduct detailed clinical examinations to ascertain the symptom onset timing, the existence of stressors and any comorbid conditions. The fundamental aspect of diagnosing conversion disorder is excluding other physical and neurological ailments [9].

The key mental illnesses that should be ruled out before considering conversion disorder encompass anxiety disorder, factitious disorder, physical symptom disorder, and malingering [9]. Additionally, it is crucial to consider conditions such as multiple sclerosis, myasthenia gravis, periodic paralysis, polymyositis, systemic lupus erythematosus, and cerebral stroke as the primary physical illnesses to be evaluated. However, other conditions with lower prevalence rates may also manifest symptoms akin to conversion disorder [4].

Among the physical diseases that can mimic conversion disorders, heart tumors stand out as a lesser-known entity. Within this category, cardiac angiosarcoma is one of the rarest types of heart tumors characterized by a highly progressive nature. It may not be initially detected in initial evaluations but could surface during subsequent follow-up examinations [10].

In our case, the presence of symptoms such as weakness and fatigue, numbness and tingling in the limbs, pain primarily in the upper limbs, particularly in the proximal area, coupled with the absence of evident physical findings during clinical examinations and initial echocardiography, along with normal imaging, led the physician to suspect conversion disorder. Consequently, a psychiatric consultation was requested. In this scenario, while considering the possibility of conversion disorder, parallel medical assessments were also being conducted. Due to the rarity of the physical ailment, it remained undetected in the initial medical evaluations. Subsequently, following the diagnosis of conversion disorder and further comprehensive medical evaluations, it was revealed that the underlying cause of the patient's symptoms was a rare physical condition known as cardiac angiosarcoma.

This case underscores the importance of recognizing that due to symptom similarities between conversion disorder and certain medical conditions, alongside considering the diagnosis of conversion disorder, the potential for underlying physical issues should always be acknowledged. Medical evaluations should not be overlooked, and psychiatrists (particularly during psychiatric consultations) and medical specialists should remain vigilant.

Ethical Considerations

Compliance with ethical guidelines

This study was approved by the Ethics Committee of Iran University of Medical Sciences (Code: IR.IUMS.REC.1402.675). Informed consent was obtained from the patient for publication of this study.

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Authors' contributions

Writing the original draft: Saba Seyyed Shariatdoust; Review and editing: Soode Tajik Esmaeeli; Supervision and administration: Mehdi Nasr Esfahani.

Conflict of interest

The authors declared no conflict of interest.

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