CASE REPORT

Cotard's Syndrome and Wolff-Parkinson-White Syndrome in a Young Female: A Rare Co-Occurrence

Gokul. P. Reghunathan[1], Venkatraman Nataraja[n2], Kavitha Parthiban[3], Raman K[4]

[1] Final year postgraduate, Department of Psychiatry, Saveetha medical college Hospital, Saveetha Institute of Medical and Technical Sciences (SIMATS), Chennai,602105, India
[2] Associate Professor, Department of Psychiatry, Saveetha Institute of Medical and Technical Sciences (SIMATS), Chennai,602105, India
[3] Senior Resident, Saveetha medical college Hospital, Saveetha Institute of Medical and Technical Sciences (SIMATS), Chennai,602105, India
[4] Professor, Department of Psychiatry, Saveetha Institute of Medical and Technical Sciences (SIMATS), Chennai,602105, India

ABSTRACT

Cotard's Syndrome (CS) is a rare psychiatric disorder characterized by nihilistic delusions, often associated with severe depressive symptoms. Wolff-Parkinson-White (WPW) Syndrome is a cardiac condition marked by abnormal electrical pathways in the heart, leading to arrhythmias. This case report details a young female with a history of Hypertrophic Obstructive Cardiomyopathy (HOCM) who presented with CS and was incidentally diagnosed with WPW Syndrome during routine investigations. This unique case underscores the complexities of managing psychiatric symptoms alongside cardiac conditions, highlighting the need for a multidisciplinary approach and comprehensive medical evaluations in psychiatric patients.

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Corresponding Author:
Venkatraman Natarajan, MD
Email: venkatknr2001@gmail.com
Tel : +91 9865333755

INTRODUCTION

Cotard's Syndrome (CS) is a rare and severe psychiatric condition first described by Jules Cotard in 1880. It is characterized by nihilistic delusions where patients believe they are dead, do not exist, or have lost their internal organs. Although CS is typically associated with severe depressive disorders, it can also be seen in schizophrenia, bipolar disorder, and other psychiatric conditions [1]. Wolff-Parkinson-White (WPW) Syndrome is a congenital cardiac disorder involving an accessory electrical pathway, leading to episodes of tachycardia and other arrhythmias. The simultaneous presence of CS and WPW Syndrome is exceedingly rare and presents unique diagnostic and therapeutic challenges. This report highlights the challenges in diagnosing and managing these coexisting conditions and emphasizes the need for a comprehensive, multidisciplinary approach [2]

CASE REPORT

Patient Information

A 24-year-old female with a known history of Hypertrophic Obstructive Cardiomyopathy (HOCM) presented to our psychiatric outpatient clinic with an 8-month history of progressively worsening psychiatric symptoms. The patient reported experiencing low mood, disturbed sleep, food refusal, and increased irritability. She also described hearing voices of gods singing death ritual songs and expressed a belief that she was no longer alive. Her unusual behaviour included taking pictures of herself with a turban and applying turmeric to her face, mimicking death rituals which she believed was necessary because her parents did not acknowledge her death.

Clinical Findings
On examination, the patient's speech was coherent, had an irritable mood, and an affect that was incongruent with her reported feelings. She had strong nihilistic delusions, insisting she was dead, and experienced second-person auditory hallucinations. Her judgment was significantly impaired, and she showed a lack of insight (grade 1 insight).

Diagnostic Assessment
Given her severe psychiatric symptoms, a comprehensive psychiatric assessment was conducted. Routine laboratory tests, including complete blood count and liver function tests, were normal. Electrocardiography (ECG) performed as part of her routine medical evaluation incidentally revealed Wolff-Parkinson-White (WPW) Syndrome, characterized by narrow QRS complexes, a positive delta wave, and a prolonged PR interval.

Differential Diagnosis
The differential diagnosis for the patient's psychiatric presentation included several conditions:

1. Severe Depressive Disorder with Psychotic Features: Given her nihilistic delusions and low mood, severe depressive disorder was considered, though the lack of pervasive mood-congruent affective symptoms made this less likely [3]
2. Schizoaffective Disorder: The combination of psychotic and mood symptoms suggested schizoaffective disorder, but the absence of sustained mood symptoms without psychosis argued against this diagnosis [3].
3. Delusional Disorder: Persistent isolated delusions are characteristic of delusional disorder, but the broad spectrum of her symptoms aligned more with a schizophrenia spectrum disorder [3].
4. Psychotic Disorder Due to Another Medical Condition: Considering the incidental WPW Syndrome diagnosis, psychotic symptoms due to a medical condition were considered, although the delusions did not directly correlate with typical neurological conditions [3].
5. Substance-Induced Psychotic Disorder: The absence of a clear substance use history made this less likely [3].
6. Brief Psychotic Disorder: The duration of her symptoms for 8 months did not align with criteria for a brief psychotic disorder [3].
7. Primary Cardiac Conditions: Psychiatric symptoms secondary to primary cardiac conditions were considered, but her detailed psychiatric presentation suggested a complex interplay between psychiatric and cardiac factors [3].

Therapeutic Intervention
The patient was diagnosed with Paranoid Schizophrenia (ICD-10: F20.0), based on the presence of auditory hallucinations, persecutory delusions, impaired judgment, and impaired insight and fulfilling the diagnostic criteria for Paranoid Schizophrenia. Due to the severity of her symptoms, she was admitted for inpatient care. Her family was psycho-educated about her psychiatric disorder and was involved in her treatment planning. Concurrently, the diagnosis of WPW Syndrome necessitated a cardiology consultation.

Cardiology Management
The cardiology team confirmed WPW Syndrome based on the ECG findings Fig. 1: ECG showing slurred initial upstroke of QRS complexes (delta wave), widened QRS complex (>120ms) and prominent R wave in leads V1 – V3 (pseudo infarction pattern) indicative of WPW Syndrome, indicative of WPW syndrome. Given the patient's psychiatric condition and the potential for psychotropic medications to affect cardiac function, a cautious approach was adopted. Antipsychotic medications were chosen with careful consideration of their cardiac side effect profiles. The patient was closely monitored for any adverse effects, and her treatment plan was adjusted based on ongoing evaluations by both psychiatry and cardiology department

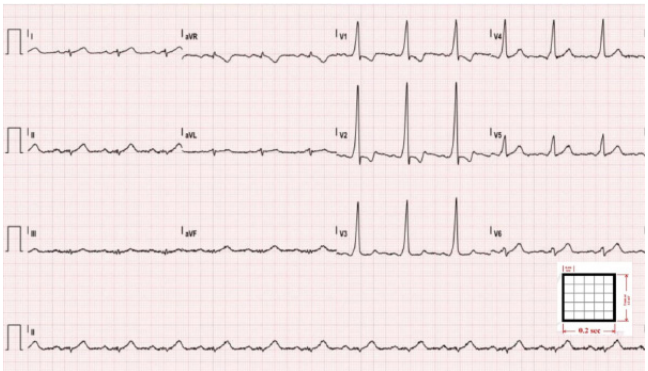

Fig. 1: ECG showing slurred initial upstroke of QRS complexes (delta wave), widened QRS complex (>120ms) and prominent R wave in leads V1 – V3 (pseudo infarction pattern) indicative of WPW Syndrome.

DISCUSSION

Cotard's Syndrome (CS) is a rare and severe condition marked by nihilistic delusions. The pathophysiology of CS is not fully understood, but it is believed to involve disruptions in the neural pathways that integrate sensory information and emotional processing, particularly between the sensory cortex and the limbic system [4]. The co-occurrence of CS with schizophrenia, as observed in this patient, is particularly rare and presents significant diagnostic challenges. Neuroimaging studies have suggested that patients with CS and schizophrenia may have disruptions in information flow between the sensory cortex and limbic regions [4].

WPW Syndrome, characterized by an accessory electrical pathway in the heart, can lead to episodes of tachycardia and other arrhythmias. In this case, WPW Syndrome was discovered incidentally during a routine ECG, highlighting the importance of comprehensive

medical evaluations in patients presenting with psychiatric symptoms [5]. The presence of WPW Syndrome demanded careful consideration of the cardiac side effects of antipsychotic medications, requiring close collaboration between psychiatry and cardiology department.

The coexistence of CS and WPW Syndrome in this patient raises interesting questions about potential shared pathophysiological mechanisms. While CS is associated with disturbances in dopamine receptor binding, the link between CS and WPW Syndrome remains unclear and warrants further investigation. The management of this case underscores the importance of a multidisciplinary approach in treating patients with complex comorbidities, ensuring that both psychiatric and medical conditions are addressed comprehensively [5].

CONCLUSION

This case report highlights the necessity of Interdepartmental teamwork in managing complex psychiatric conditions, particularly when associated with cardiac comorbidities. Early identification and comprehensive medical evaluations are crucial for optimal patient outcomes. While previous studies have explored CS within the context of schizophrenia[1] and the incidental discovery of WPW Syndrome in patients with psychiatric symptoms[3], this case uniquely highlights the intersection of these conditions along with a significant pre-existing cardiac issue and contributes to the existing medical knowledge by illustrating the complexities of coexisting Cotard's Syndrome and Wolff-Parkinson-White Syndrome and also underscores the importance of collaborative efforts across specialties.

Learning Points in this case study includes:

1. Identification of Rare Comorbidities: This case emphasizes the importance of recognizing uncommon comorbidities in psychiatric patients, such as the coexistence of Cotard's Syndrome (CS) and Wolff-Parkinson-White (WPW) Syndrome.
2. Collaborative Approach: Effective management of psychiatric symptoms alongside cardiac conditions necessitates interdisciplinary collaboration between psychiatry and cardiology department
3. Significance of Routine Investigations: Routine investigations, such as electrocardiography (ECG), are crucial in identifying cardiac conditions like WPW Syndrome, emphasizing the need for thorough medical assessments in psychiatric patients.
4. Challenges in Diagnosis and Management: Diagnosing and managing psychiatric symptoms in the presence of cardiac comorbidities presents unique challenges, requiring interdepartmental approach for tailored treatment.
5. Early Identification for Proactive Management: Early identification of conditions like WPW Syndrome, even in asymptomatic cases, is vital for proactive management and better prognosis.
6. Caution in Medication Selection: Careful consideration of psychotropic medications in patients with cardiac conditions is crucial, necessitating collaborative decision-making between psychiatry and cardiology for balanced treatment.

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