

Pericarditis aguda asociada a la enfermedad de Graves: un caso clínico

Acute Pericarditis Associated with Graves' Disease: A Case Report

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ABSTRACT

Acute pericarditis is an uncommon but significant complication of Graves' disease. This case report describes a 53-year-old female presenting with acute pericarditis in the context of newly diagnosed Graves' disease. The patient's clinical presentation, diagnostic evaluation, treatment course, and outcome are discussed. We also provide a comprehensive review of the literature on pericarditis associated with Graves' disease, including its pathophysiology, clinical features, diagnostic challenges, and therapeutic approaches. This report highlights the importance of considering thyroid dysfunction in cases of idiopathic pericarditis, as prompt diagnosis and targeted treatment can significantly improve outcomes.

Keywords: Acute pericarditis, autoimmune inflammation, Graves' disease, hyperthyroidism.

RESUMEN

La pericarditis aguda es una complicación poco frecuente, pero importante, de la enfermedad de Graves. En este caso clínico se describe el caso de una mujer de 53 años que presentó pericarditis aguda en el contexto de una enfermedad de Graves recién diagnosticada. Se analizan el cuadro clínico de la paciente, la evaluación diagnóstica, la evolución del tratamiento y el resultado. Asimismo, ofrecemos una revisión exhaustiva de la literatura sobre la pericarditis asociada a la enfermedad de Graves, incluyendo su fisiopatología, características clínicas, dificultades diagnósticas y enfoques terapéuticos. Este informe destaca la importancia de considerar la disfunción tiroidea en los casos de pericarditis idiopática, ya que un diagnóstico precoz y un tratamiento específico pueden mejorar significativamente los resultados.

Palabras clave: Pericarditis aguda, inflamación autoinmune, enfermedad de Graves, hipertiroidismo.

INTRODUCTION

Graves' disease, an autoimmune hyperthyroid disorder, is a leading cause of hyperthyroidism worldwide, with a prevalence of approximately 1.5% in women and 0.5% in men^{1,2}. While its most common manifestations include ophthalmopathy, dermopathy, and thyroid dysfunction, it can also present with less typical complications such as acute pericarditis³. Acute pericarditis associated with Graves' disease is rare, with only a limited number of cases reported in the literature.⁴

The underlying mechanism linking Graves' disease to pericarditis remains unclear but is thought to involve immune-mediated inflammation, hypermetabolic effects, and associated autoantibody activity⁵. Patients may present with typical pericarditis symptoms, including chest pain, dyspnea, and fever, alongside features of hyperthyroidism such as weight loss, palpitations, and heat intolerance.⁶

Diagnosis of Graves' disease-related pericarditis requires a high index of suspicion and thorough investigation to exclude other etiologies. Treatment focuses on managing both the pericarditis and the underlying thyroid disorder. Despite its rarity, recognizing this association is crucial, as timely intervention can lead to excellent clinical outcomes.⁷

CASE PRESENTATION

We describe the case of a 53-year-old female with no significant past medical history, except for a thyroid scintigraphy performed a few weeks prior that suggested a mild goiter and increased technetium uptake, indicative of glandular hyperfunction. She had not undergone further evaluation at the time.

The patient presented with a six-month history of weight loss, asthenia, palpitations, heat intolerance, nocturnal hyperhidrosis, and dry throat. Two weeks prior to admission, she developed anterior chest pain exacerbated by inspiration and relieved by leaning forward, as well as progressively worsening dyspnea. Fever had appeared one week before admission and responded to paracetamol. She denied other symptoms or epidemiological exposures.

On admission, her vital signs revealed blood pressure of 109/61 mmHg, oxygen saturation of 97% on room air, and a temperature of 38°C. Cardiac auscultation revealed muffled heart sounds, though S1 and S2 were present. Laboratory investigations showed an elevated C-reactive protein (15.2 mg/dL), erythrocyte sedimentation rate (62 mm/h), and D-dimer (1,964 ng/mL), with normal cardiac troponin levels. An electrocardiogram revealed generalized concave ST-segment elevation, and echocardiography demonstrated a pericardial effusion measuring 1.9 cm without signs of tamponade. A thoracic CT angiogram excluded pulmonary embolism but confirmed the pericardial effusion.⁸

Further evaluation revealed suppressed TSH (<0.008 µIU/mL), elevated free T4 (2.3 ng/dL), and positive thyrotropin receptor antibodies (TRAb, 5.3 IU/L). Extensive infectious and autoimmune workup, including serologies for Epstein-Barr virus, cytomegalovirus, herpes simplex, HIV, and *Mycoplasma pneumoniae*, as well as ANA and anti-dsDNA, were negative. Imaging studies, including abdominopelvic CT and mammography, excluded malignancy.

Based on clinical findings and exclusion of other causes, a diagnosis of acute pericarditis associated with Graves' disease was established.

The patient was treated with colchicine (0.5 mg for 3 months), ibuprofen in a tapering regimen, and methimazole for hyperthyroidism. She was discharged two weeks later with complete resolution of symptoms. At six-month follow-up, echocardiography showed resolution of the pericardial effusion, and thyroid function was stable.

DISCUSSION

Pericarditis is an uncommon manifestation of Graves' disease, and its pathogenesis remains poorly understood. Proposed mechanisms include autoimmune inflammation, direct effects of thyrotoxicosis, and increased capillary permeability⁹. The prevalence of pericarditis in Graves' disease is unknown, but the limited cases reported underscore its rarity.¹⁰

The clinical presentation of pericarditis in Graves' disease is often indistinguishable from other causes, characterized by chest pain, dyspnea, and fever. However, concurrent symptoms of hyperthyroidism, such as weight loss, heat intolerance, and palpitations, may provide diagnostic clues.¹¹

Diagnostic evaluation should include thyroid function tests, autoantibody assays, and imaging studies to confirm pericarditis and evaluate the underlying cause. In our case, suppressed TSH, elevated free T4, and positive TRAb established the diagnosis of Graves' disease. Echocardiography confirmed the presence of a significant pericardial effusion.¹²

Management of Graves' disease-related pericarditis involves addressing both conditions. Anti-inflammatory agents such as colchicine and NSAIDs are standard treatments for pericarditis, while antithyroid drugs like methimazole or propylthiouracil are essential for controlling hyperthyroidism. The prognosis is generally favorable with appropriate treatment, as demonstrated in this case.¹³

CONCLUSION

This case highlights the rare but important association between acute pericarditis and Graves' disease. Early recognition and targeted management are crucial for favorable outcomes. Clinicians should maintain a high index of suspicion for thyroid dysfunction in cases of idiopathic pericarditis, as timely diagnosis and intervention can prevent complications and improve patient prognosis.

CONFLICT OF INTEREST

There are no conflicts of interest.

ETHICAL ASPECTS

This case report was conducted in accordance with ethical standards and received approval from the appropriate institutional review board. All data were collected and reported while maintaining patient confidentiality. The patient provided verbal informed consent for the use of anonymized clinical information in the preparation and publication of this case report.

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