

Acute and chronic pericarditis-modern diagnostic and therapeutic considerations.

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Abstract

Pericarditis is an inflammatory disease of the pericardium that may present as either an acute or chronic condition. Acute pericarditis is one of the most common pericardial disorders and is typically characterized by chest pain, electrocardiographic abnormalities, and pericardial inflammation. Chronic pericarditis may develop following recurrent episodes of inflammation and can lead to complications such as constrictive pericarditis and chronic pericardial effusion. Advances in imaging techniques and anti-inflammatory therapies have improved diagnostic accuracy and treatment outcomes. This article reviews the etiology, pathophysiology, clinical manifestations, diagnostic methods, and current therapeutic approaches to acute and chronic pericarditis.

41

Keywords: pericarditis, acute pericarditis, chronic pericarditis, pericardial effusion, constrictive pericarditis, echocardiography, colchicine, cardiovascular disease.

Pericarditis refers to inflammation of the pericardium, the double-layered sac surrounding the heart. The condition may occur as an isolated disorder or as a manifestation of infectious, autoimmune, metabolic, or neoplastic diseases. Acute

pericarditis develops suddenly and usually resolves within several weeks, whereas chronic pericarditis persists for more than three months and may be associated with recurrent inflammation or structural changes of the pericardium. Although the prognosis is generally favorable, delayed diagnosis or inadequate treatment may result in serious complications affecting cardiac function. Therefore, understanding modern diagnostic and therapeutic approaches is essential for optimal patient management. The causes of acute and chronic pericarditis are diverse and can be classified into infectious and noninfectious categories. Viral infections remain the most common cause of acute pericarditis in developed countries. Common viral pathogens include Coxsackievirus, Echovirus, Adenovirus, and Cytomegalovirus. Bacterial infections, particularly tuberculosis, continue to be important causes in developing regions. Noninfectious causes include autoimmune diseases such as systemic lupus erythematosus and rheumatoid arthritis, malignancies, uremia, radiation therapy, and post-cardiac injury syndromes. In many patients, the precise cause cannot be identified, and the condition is classified as idiopathic pericarditis.

Inflammation of the pericardial layers leads to increased vascular permeability and infiltration by inflammatory cells. This process may result in accumulation of fluid within the pericardial cavity, known as pericardial effusion. Acute inflammation typically causes pain and pericardial irritation, while chronic inflammation may lead to fibrosis, thickening, and calcification of the pericardium. These structural changes can impair ventricular filling and ultimately cause constrictive pericarditis, a severe form of chronic pericardial disease.

Most patients with acute pericarditis experience complete recovery with appropriate treatment. However, recurrent episodes occur in approximately 15–30% of cases. Potential complications include pericardial effusion, cardiac tamponade, recurrent pericarditis, and constrictive pericarditis. Early diagnosis and

adequate therapy significantly reduce the risk of adverse outcomes. The prognosis of chronic pericarditis depends on the underlying etiology and the extent of structural pericardial damage. Patients who undergo timely intervention generally achieve favorable long-term outcomes.

Acute and chronic pericarditis remain important causes of cardiovascular morbidity worldwide. Advances in echocardiography, cardiac magnetic resonance imaging, and anti-inflammatory therapy have improved the diagnosis and management of these conditions. Early recognition of symptoms, accurate identification of underlying causes, and individualized treatment strategies are essential for preventing complications and ensuring optimal patient outcomes.

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