

The role of multimodality imaging in takotsubo cardiomyopathy

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Abstract

Introduction

Takotsubo cardiomyopathy was first described about two decades ago and has been recognized with increasing frequency. It is characterized by the typical apical ballooning of the left ventricle, resulting from apical and midventricular akinesis and hypercontractility of the basal segments, in the absence of obstructive coronary artery disease. The pathophysiology of the condition has not been completely understood, and several theories including catecholamine excess, microcirculatory dysfunction, and intracavitary gradient have been described. The diagnosis is usually suspected during coronary angiography, but in recent years there has been increasing interest in the use of several imaging modalities for its diagnosis and evaluation.

Objectives

In this review the role of several imaging techniques for the initial assessment, follow-up and pathophysiological characterization of takotsubo cardiomyopathy is discussed, focusing on echocardiography, cardiac magnetic resonance imaging, computed tomography, nuclear medicine imaging and novel invasive modalities.

Keywords

Takotsubo cardiomyopathy, Echocardiography, Cardiac magnetic resonance, Cardiac computed tomography, Nuclear medicine imaging