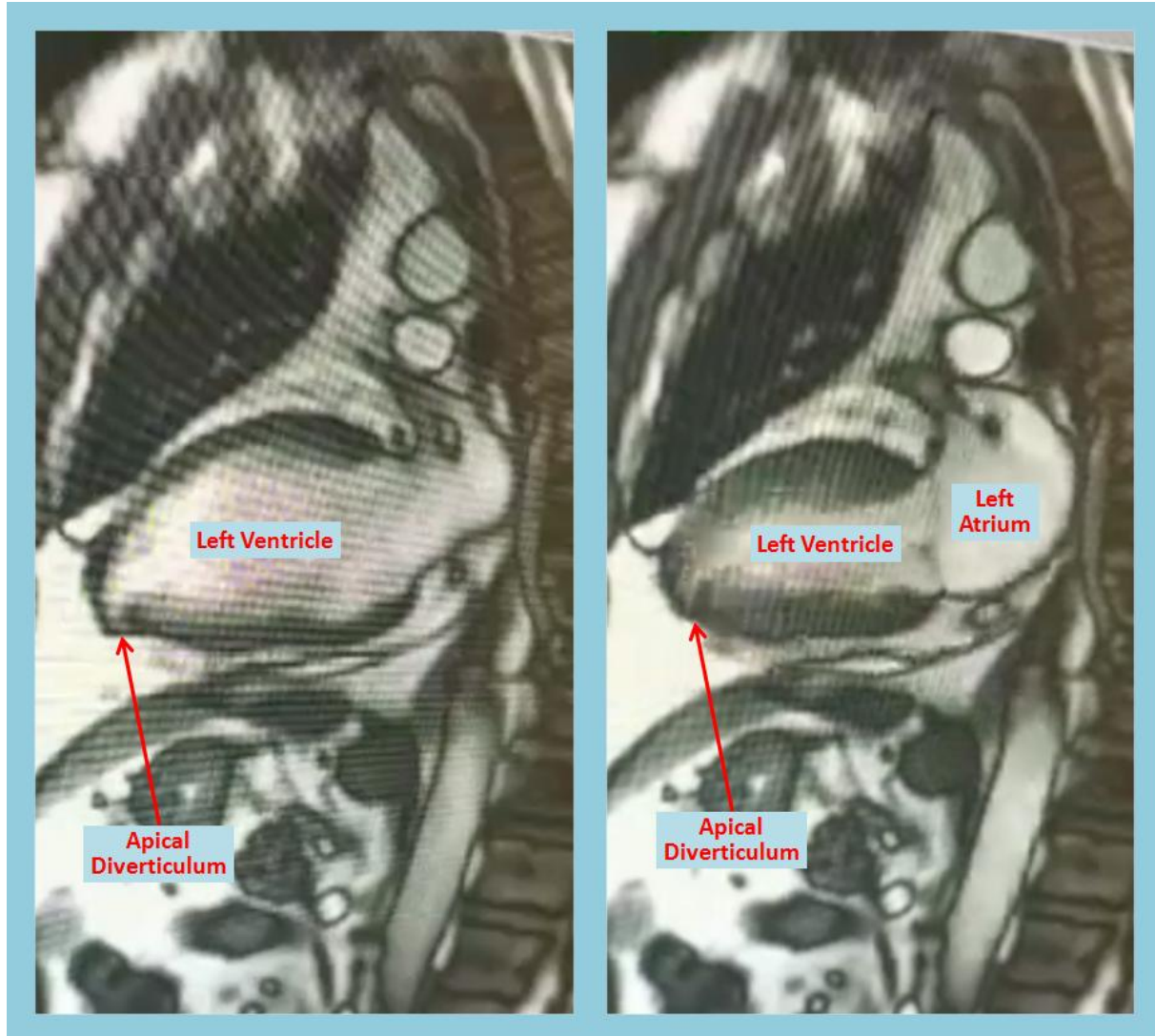


## Ventricular Diverticulum! *Beyond The Colon!*

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### Description

Diverticulum, aneurysm and pseudoaneurysm are some left ventricular outpouchings that are increasingly detected on imaging with the advent of recent imaging techniques [1]. Management depends on proper distinction among these entities as outcomes differ drastically; unfortunately, such distinction may be challenging [2]. Echocardiography remains the

initial test of choice in the diagnosis and characterization of these lesions, but it is operator dependent and sometimes can be technically limited [3]. Cardiac Computed Tomography (CCT), Cardiac Magnetic Resonance imaging (CMR) and left ventriculography may help enhance the diagnosis and characterization of these outpouchings [4].

Left ventricular diverticulum is an outpouching that contains all three layers such as endocardium, myocardium, and pericardium and displays synchronous contractility. As per the earlier studies reported a prevalence of 0.4%, however it has increased prevalence of 2.2% after the usage of multi-detector computed tomography angiography [5]. They may be congenital or acquired, former being more common. Most common congenital causes of left diverticulum is excessive primordial cell stimulation, in utero viral infection, muscle and connective tissue defects, and midline defects in association with other malformations, as part of Cantrell Syndrome [6].

These diverticula are often asymptomatic and may be found incidentally during diagnostic work up for other reasons. Their size may vary from as small as 0.5 cm in diameter to as large as 8-9 cm [7]. Embolism, rupture, thrombosis, and ventricular arrhythmias can complicate these diverticula, however true incidence of these complications remains unknown [8]. Spontaneous regression is seen in few cases and their size may not change over a considerable period of time suggesting a benign course. Close clinical follow up is usually sufficient and further management should be based on associated abnormalities and potential complications.

CMR allows anatomical and functional evaluation of left ventriculum diverticulum, along with tissue characterization, which carries therapeutic and prognostic implications [9]. Diverticulum contains all myocardial layers, and CMR is very helpful in tissue characterization, distinguishing among pericardium, thrombus and

the myocardium. Although such characterization may be difficult on conventional CMR in thinned out and scarred or infarcted myocardium, such imaging remains crucial in planning surgical intervention as it can delineate the relationship of the diverticulum to different structures like the mitral valve [10].

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Manuscript submitted June 24, 2019, accepted July 3, 2019.

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**KEYWORDS:** Left Ventricular Diverticulum; Congenital Heart Disease; Cardiac Imaging

Reference this article as:

Bardia N, Nguyen L, Sachdev S, Kolakalapudi P, Omar B. Ventricular Diverticulum! Beyond The Colon! Cardiofel Newslet 2019 July; 2(7): 30-32.