



Clinical-Medical Image

A Brief Report on Hypertrophic Cardiomyopathy

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An inherited primary myocardial disease known as hypertrophic cardiomyopathy (HCM) is characterized by poor prognosis, asymmetrical or symmetrical left ventricle (LV) hypertrophy, and dynamic obstruction of the LV outflow tract (LVOT). For patients with heart failure (HF) who have a decreased left ventricular ejection fraction (LVEF) and a prolonged QRS duration of more than 120 milliseconds, with or without left bundle branch block (LBBB), cardiac resynchronization therapy (CRT) has emerged as a minimally invasive treatment option. Several HCM patients, particularly those with thin myofilament mutations, are at risk of developing LBBB due to disease progression or septal myomectomy, while others may develop HF with decreased LVEF, referred to as “end-stage” or “dilated HCM.” Left bundle branch pacing or CRT may help patients with myectomy-induced LBBB reduce symptoms, increase exercise capacity, and improve LVEF, according to a number of studies. Otherwise, CRT may benefit patients with end-stage/dilated HCM and a prolonged QRS interval in terms of NYHA class improvement, increased LV systolic performance, and, to some extent, LV reverse remodeling. In addition, the proper selection and stratification of HCM patients who can benefit from CRT may be aided by a number of electrical and imaging parameters.

In the absence of ischemic heart disease and pressure overload conditions such as valvular heart disease or arterial hypertension, hypertrophic cardiomyopathy (HCM) is a primary myocardial disease characterized by asymmetrical left ventricle (LV) hypertrophy, with or without LV outflow tract (LVOT) dynamic obstruction, and myocardial fibrosis. This condition typically develops with a poor prognosis. The most common causes of heart failure (HF) in HCM patients are LVOT obstruction and LV diastolic dysfunction; However, HCM can develop with LV systolic dysfunction and a decreased LV ejection fraction (LVEF) in up to 8% of patients alleged end-stage/dilated HCM. In patients with HCM, disease progression may result in HF with LBBB and decreased LV systolic function. Also, septal myomectomy might cause LBBB. As a result, CRT may emerge as a viable treatment option for these patients, and electrical and imaging parameters may assist in stratification and selection. These results need to be confirmed by larger cohort studies [1,2].

Keywords: Hypertrophic cardiomyopathy; Cardiac resynchronization therapy; Apical rocking

References

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