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Perspective

Note on Importance of Cardiomyopathy

Fumito Ichinose*

Department of Emergency Medicine, Jeju National University Hospital, Jeju City, South Korea

DESCRIPTION

Cardiomyopathy refers to a group of heart muscle illnesses. There may be a little or no symptoms at first. Due to the beginning of heart failure, shortness of breath, fatigue, and swelling of the legs may occur as the condition progresses. There will be a possibility that, the patient will be having an irregular heartbeat and pass out and chances of getting faint out. Those who are affected are more likely to suffer from sudden cardiac death.

The various types of Cardiomyopathies are Hypertrophic Cardiomyopathy (HCM), Dilated Cardiomyopathy (DCM), Restrictive Cardiomyopathy (RCM), Arrhythmogenic right ventricular dysplasia. Hypertrophic cardiomyopathy causes the heart muscle to thicken and expand. The ventricles expand and weaken in dilated cardiomyopathy. The ventricle stiffens with restrictive cardiomyopathy. In many situations, the cause of the problem is unknown. Although hypertrophic cardiomyopathy is usually genetic, dilated cardiomyopathy is inherited in about one-third of cases. Dilated cardiomyopathy can be caused by a variety of factors, including alcohol, heavy metals, coronary artery disease, cocaine use, and viral infections. Restrictive cardiomyopathy can be caused by amyloidosis, hemochromatosis, and different cancer treatments. Broken heart syndrome can be caused by extreme mental or physical stress.

The type of cardiomyopathy and the severity of the symptoms determine the course of treatment. Treatment options include lifestyle modifications, medications, and surgery. During surgery, a ventricular assist device or a heart transplant may be used. Cardiomyopathy and myocarditis impacted 2.5 million people in 2015. One in every 2,500 people has dilated cardiomyopathy, while one in every 500 has hypertrophic cardiomyopathy. Young people are more likely to have arrhythmogenic right ventricular dysplasia. Cardiomyopathies can be heart-specific or part of a larger systemic disease and both can result in cardiovascular mortality or progressive heart failure-related disability. Other disorders that induce cardiac muscle dysfunction, such as coronary artery disease, hypertension, and heart valve anomalies, are not considered. The underlying cause is frequently unclear; however in many cases it may be identified. Dilated cardiomyopathy has been linked to a variety of factors including alcoholism, drug toxicity, and some infections (including Hepatitis C) Cardiomyopathies can be caused by untreated celiac disease; however they can be totally reversed with early detection. Molecular biology and genetics have led to the recognition of many genetic reasons in addition to acquired factors.

These have proven challenging to maintain because some diseases may fit into more than one of those three categories at any given time. Cardiomyopathies are classified as main or secondary by the American Heart Association (AHA). Primary cardiomyopathies affect only the heart, whereas secondary cardiomyopathies are caused by illnesses that affect other parts of the body. These categories are further subdivided into subgroups that take into account new genetic and molecular biology research. With breakthroughs in molecular methods, the pathophysiology of cardiomyopathies is better known at the cellular level. Mutant proteins can cause problems in the contractile machinery of the heart (or mechanosensitive complexes). Alterations in Cardiomyocytes and their long-term responses at the cellular level result in changes that are linked to sudden cardiac death and other cardiac disorders.

Treatment may involve advice on how to better control the illness through lifestyle modifications. Some of the treatments available at present days include medication (conservative treatment) or iatrogenic/implanted pacemakers for slow heart rates, defibrillators for those at risk of fatal heart rhythms, Ventricular Assist Devices (VADs) for severe heart failure, or ablation for recurring dysrhythmias that cannot be eliminated by medication or mechanical cardio version. Symptom alleviation is frequently the goal of treatment, and some patients may require a heart transplant in the future. Shortness of breath is caused primarily by increased stiffness of the Left Ventricular (LV), which not only hinders ventricle filling but also causes raised pressure in the left ventricle and left atrium, resulting in back pressure and interstitial congestion in the lungs. The presence or severity of an outflow tract gradient has no effect on symptoms. Symptoms are often similar to those of congestive heart failure, but the treatments are different. In both situations, beta blockers are employed, but diuretics, which are a common treatment for CHF, increase symptoms in hypertrophic obstructive cardiomyopathy by lowering ventricular preload volume and thereby raising

Correspondence to: Dr. Fumito Ichinose, Department of Emergency Medicine, Jeju National University Hospital, Jeju City, South Korea, E-mail: ichinosefutimo@gmail.com

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outflow resistance.

Prior history of cardiac arrest or ventricular fibrillation, spontaneous sustained ventricular tachycardia, abnormal exercise blood pressure and non-sustained ventricular tachycardia, unexplained syncope, LVW thickness greater than 15 mm to 30 mm on echocardiogram, and family history of premature sudden death are all significant risk factors for sudden death in people with HCM.