

New Classification of Cardiomyopathy: Who are at Risk?

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Cardiomyopathies are diseases of heart muscle. Cardiomyopathies include a variety of myocardial disorders that manifest with various structural and functional phenotypes and are frequently genetic. Although some have defined cardiomyopathy to include myocardial disease caused by known cardiovascular causes (such as hypertension, ischemic heart disease, or valvular disease), current major society definitions of cardiomyopathy exclude heart disease secondary to such cardiovascular disorders [1].

In 1980, the World Health Organization (WHO) defined cardiomyopathies as “heart muscle diseases of unknown cause” to distinguish cardiomyopathy from cardiac dysfunction due to known cardiovascular entities such as hypertension, ischemic heart disease, or valvular disease [2].

As a result, the 1995 WHO/International Society and Federation of Cardiology (ISFC) Task Force on the Definition and Classification of the Cardiomyopathies expanded the classification to include all diseases affecting heart muscle and to take into consideration etiology as well as the dominant pathophysiology [3].

The new cardiomyopathy classification system “MOGE(S)” classification system easy-to-use online web application tool for physicians. MOGE(S) can assist in the diagnosis and management of each individual cardiomyopathy patient by helping to classify his or her following five cardiomyopathic disorder attributes including: Morphofunctional characteristic or observable clinical traits, organ involvement, genetic inheritance pattern, etiological, or explicit genetic defect cause and stage of heart failure.

The new system uses a more comprehensive, descriptive nomenclature to explain each individual patient’s cardiomyopathy using a configuration of letters as a descriptive language or code to reveal additional details instantly for the medical community to understand exactly what type of cardiomyopathy disorder and genetic mutations a patient has. This new MOGE(S) code for each patient will allow for clearer and greater understanding of a patient’s cardiomyopathy, easier communication among physicians, and even help us develop multi-centre and multinational registries for more future research into cardiomyopathies [4].

Importantly, the new MOGE(S) classification system will allow us to begin diagnosing early cardiomyopathy better, where disease is not present but genetic information and advanced cardiac imaging such as: Cardiac Magnetic Resonance Imaging (CMR), tissue Doppler echocardiography and deformation imaging shows evidence of increased risk of developing the condition in the pre-clinical stage of the disease, which will fuel clinical decision making for prevention of cardiomyopathy [5].

Finally, new emerging imaging modalities is of crucial importance to identify cardiomyopathy patients at risk for sudden cardiac death which can definitely stratify certain high risk patients for early intervention and implantation of Automated Implantable Cardioverter Defibrillator (AICD) to prevent sudden death [5,6].

Cardiac magnetic resonance imaging can identify fibrous scar in hypertrophic cardiomyopathy which is a substrate for ventricular tachyarrhythmia and sudden death. In addition, Tissue Doppler Imaging (TDI) with strain and strain rate imaging recently used for early detection of cardiac dysfunction in a preclinical disease stage among such patients population [6,7].

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