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Pathological Practices of Endocardial Biopsy: An Editorial

Billey Maccum*

Institute for Biomedical Ethics and History of Medicine, University of Zurich, Zurich, Switzerland

Editorial

Endomyocardial Biopsy (EMB) is a procedure used in transplant monitoring to evaluate heart tissue. It can also be used to diagnose myocarditis, cardiomyopathies, medication toxicity, unexplained arrhythmias, heart involvement in systemic disease, and cardiac tumours, among other things. In some illnesses, such as myocarditis and cardiac involvement by amyloidosis and sarcoidosis, pathologic examination of EMB is the gold standard. The pathophysiology of EMB in the nontransplanted heart will be the subject of our discussion. In this setting, EMB may be required for the following clinical scenarios: i) New-onset (less than 6 months) heart failure; ii) unexplained ventricular arrhythmias or conduction abnormalities; iii) chronic cardiomyopathies with a restrictive, hypertrophic, or dilated phenotype for which myocardial investigation can be useful in differentiating between different aetiologies; iv) evaluation of cardiac masses.

For cardiac transplant monitoring, an endomyocardial biopsy (EMB) is conducted on a regular basis. It can also be used to diagnose myocarditis, cardiomyopathies, medication toxicity, unexplained arrhythmias, heart involvement in systemic disease, and cardiac tumours, among other things. In some illnesses, such as myocarditis and cardiac involvement by amyloidosis and sarcoidosis, pathologic examination of EMB is the gold standard. Multiple myocardial samples should be acquired and processed in a well-equipped laboratory with access to immunohistochemical/histochemical studies, molecular assays, and transmission electron microscopy to maximise the diagnostic yield of the technique. On EMB, we go over the main diagnostic aspects of myocarditis, cardiomyopathies, and cardiac tumours, as well as the auxiliary procedures needed to obtain a diagnosis in each of these cardiac diseases.

Myocarditis/inflammatory cardiomyopathies can be classified as infectious, immune-mediated, toxic, or secondary to sensitivity reactions to exogenous chemicals, according on the aetiology. Viruses are the most common pathogens found in viral myocarditis in affluent countries. In portions of South and Central America, Trypanosoma cruzi, the parasite that causes Chagas disease, is frequently linked to myocarditis. Myocarditis is very infrequently caused by bacterial infections (neutrophilic myocarditis). Giant cell myocarditis (GCM), sarcoidosis, and autoimmune myocarditis linked with connective tissue disorders are examples of immune-mediated myocarditis.

Inflammatory cardiomyopathy is a phrase used to describe a range of diseases in which cardiac inflammation is the underlying pathogenic mechanism. Myocarditis and chronic dilated cardiomyopathy (DCM) are two conditions in which an inflammatory process can be seen. The diagnostic gold standard is an endomyocardial biopsy, which can confirm a clinical suspicion and provide vital clues about the aetiology of myocarditis. Acute heart failure of varied degrees of severity, with dilated and hypokinetic ventricles, is the most typical clinical situation associated with myocarditis. Acute chest pain without severe coronary artery disease on angiography can be a symptom of myocarditis. Specific aetiologies (Lyme disease, Chagas disease, cardiac sarcoidosis) can cause abnormal cardiac conduction and/or persistent arrhythmias [1-5].

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Conflict of Interest

There are no conflicts of interest by author.

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***Address for Correspondence:** Billey Maccum, Institute for Biomedical Ethics and History of Medicine, University of Zurich, Zurich, Switzerland; E-mail: mac.billey@yahoo.com*

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