

Diagnosing Myocarditis in Endomyocardial Biopsies: Survey of Current Practice

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Background:

Dallas criteria (DC) and European Society of Cardiology (ESC) criteria have provided valuable frameworks for the histologic diagnosis and classification of myocarditis in endomyocardial biopsy (EMB) specimens. However, the adaptation and usage of these criteria is variable and depends on local practice settings. Moreover, several ancillary tests that are not included in the current criteria such as immunohistochemistry (IHC) or viral PCR, have proven useful for the diagnosis of myocarditis.

Design:

As a joint effort from the Association for European Cardiovascular Pathology (AECVP) and the Society for Cardiovascular Pathology (SCVP), we conducted an online survey to understand the current practice of diagnosing myocarditis.

Results:

A total of 100 pathologists from 23 countries responded to the survey with the majority practicing in North America (46%) and Europe (43%). Most of the pathologists (85%) examined less than 200 native heart biopsies per year, and rendered diagnosis of myocarditis less than 30 cases per year (92%). Most of the pathology labs (89%) routinely receive 3-5 fragments of tissue per case. The number of hematoxylin-eosin stained levels for each case varies from 1 to more than 9 levels, with 20% of pathologists routinely asking for more than 9 levels per case. Among the 100 pathologists, 80 use DC and 41 the ESC criteria. Breaking down by regions, DC is more commonly used than ESC criteria in North America (80% versus 19.6%) while both criteria are commonly used in Europe (79.1% and 62.8%). IHC is utilized in either every case or selected cases for 79% of participants, and viral PCR is performed by 32% of participants. Variable terminologies are used in EMB myocarditis reporting, some as histological diagnoses and others as clinical diagnoses (e.g. fulminant myocarditis), and 34 pathologists do not use the term "borderline myocarditis". The majority of the participants think it is time to update the current criteria (83%).

Conclusion:

The survey data demonstrated that pathologists who diagnose myocarditis practice with variable tissue preparation, ancillary studies, guideline usage and reporting. These results highlight the clinically unmet need and desire to update and standardize the current diagnostic criteria for myocarditis on EMB. Additional studies are warranted to establish standard of practice.