Communications

Peter C. Hill, M.D., Monte A. Herman, M.D., F.C.C.P., and Prashant Kumar Rohatgi, M.D., Division of Pulmonary Diseases and Allergy, George Washington University Medical Center, Washington, DC

REFERENCE


Catecholamine-Induced Cardiomyopathy in Multiple Endocrine Neoplasia

To the Editor:

I read with interest the article by Frustaci et al., which appeared in the February 1991 issue of Chest. The authors reported histologic, ultrastructural, and biochemical findings in the endomyocardial biopsy tissue of a 33-year-old man with multiple endocrine neoplasia and catecholamine-induced cardiomyopathy.

Although their morphologic findings were similar to those reported in patients with pheochromocytomas, I am concerned that there may have been some overinterpretation of the biopsy findings in their case. Their findings included hypertrophy, contraction band necrosis, moderate inflammatory reaction, and interstitial fibrosis. In particular, the authors made an association between contraction band necrosis and the biochemical observation of elevated sarcoplasmic calcium.

I suggest caution in accepting this interpretation. First, although contraction bands were present, the figures in the article do not support an interpretation of actual myocyte necrosis. Cell injury does not imply cell death. Second, and more important, contraction bands represent the most commonly observed artifact in endomyocardial biopsy tissues. The authors' observations and interpretations would have been strengthened considerably if they had been compared to findings in endomyocardial biopsy tissue from patents with idiopathic dilated cardiomyopathy.

In addition, the authors described "a moderate inflammatory reaction, mainly due to macrophages and fibroblasts." It should be noted that fibroblasts are indicative of a reparative response, not an inflammatory reaction. Thus, the abnormalities reported in the biopsy samples (hypertrophy, contraction bands, and interstitial fibrosis) are typical of idiopathic dilated cardiomyopathy and are not specific for catecholamine-induced cardiomyopathy.

The comparison of biopsy tissues in this case with surgically excised tissue from a patient with tetralogy of Fallot was not necessarily helpful. The extent of artifactual contraction bands tends to be appreciably less in myocardium removed surgically than in smaller samples removed with a bioprobe.

Andrea Frustaci, M.D., F.C.C.P., Institute of Cardiology, Catholic University of the Sacred Heart, Rome, Italy

Reprint requests: Dr. Frustaci, Cardiology Department, Catholic University, Largo Gemelli 8, 00168 Rome, Italy

To the Editor:

I thank Dr. Edwards for his comments. I agree that contraction bands are not uncommon artifacts during the histologic analysis of biopsy samples and that they can be part of morphologic changes of idiopathic dilated cardiomyopathy. Nevertheless, this is not the case with contraction band necrosis, which is never considered an artifact and is not a usual finding in idiopathic dilated cardiomyopathy.

The term "inflammatory reaction" was applied because an increased number of lymphocytes were observed in the interstitium together with macrophages and fibroblasts.

Finally, the increased levels of myocardial calcium and the clinical profile exhibiting partial recovery of cardiac function and decreased ECG voltages after pheochromocytoma removal strongly suggest a relation between cardiomyopathy and catecholamine overproduction.

William D. Edwards, M.D., F.C.C.P., Department of Laboratory Medicine and Pathology, Mayo Clinic, Rochester, Minnesota

REFERENCES


Downloaded From: http://journal.publications.chestnet.org/pdfaccess.ashx?url=/data/journals/chest/21637/ on 06/27/2017