LETTERS TO THE EDITOR

The role of endomyocardial biopsy in the management of cardiovascular disease: a Scientific Statement from the American Heart Association, the American College of Cardiology, and the European Society of Cardiology

May we draw your attention to the ESC/AHA/ACC scientific statement published in the December issue of the European Heart Journal.1 Scenario 10 discusses the indication for endomyocardial biopsy in patients with suspected myocardial siderosis (due to hereditary or acquired haemochromatosis). This states that ‘cardiac involvement in haemochromatosis usually can be diagnosed on the basis of history, clinical examination, and echocardiography or cardiac magnetic resonance (CMR) demonstrating dilated cardiomyopathy in the setting of laboratory abnormalities such as elevated serum iron and haemochromatosis gene mutation’. On the contrary, cardiac siderosis often presents late, and ventricular dimensions may be normal until the late stages of disease.2 In addition, conventional markers for iron overload such as serum ferritin and liver iron, but are poorly correlated with cardiac iron stores. Recently, a new method using the cardiovascular magnetic resonance (CMR) T2* technique has been used for the measurement of myocardial iron overload, and the method has been validated in multiple laboratories.1 It has been shown that serum ferritin measurements are a reasonable surrogate of liver iron, but are poorly correlated with cardiac iron stores. Recently, a new method using the cardiovascular magnetic resonance (CMR) T2* technique has been used for the measurement of tissue iron in the liver, but what has not yet been shown is calibration of myocardial T2* against absolute myocardial iron levels in humans.2,3 In the clinical setting, T2* measurements have been used to assess cardiac iron loading and the studies suggest a useful correlation between myocardial T2* and cardiac function thereby allowing early diagnosis and treatment. Although there is no disputing the clinical merits of CMR-measured myocardial T2* in the evaluation of cardiac function, there may be additional value in knowing the relationship between myocardial T2* and directly measured myocardial iron levels. Validation of myocardial T2* and myocardial tissue iron may not be feasible in humans and may not be required since cardiac iron estimates by MRI in animal models has been validated.4

Lisa Anderson
Department of Cardiology
St George’s Hospital
London SW17 OQT
UK
Tel: +44 20 8675 1220
Fax: +44 20 8675 4505
Email: lisa.anderson@stgeorges.nhs.uk

Dudley Pennell
CMR Unit
Royal Brompton Hospital
Sydney Street
London SW3 6WP
UK

References
5. Tannenbaum SR, Beller GA, Shaw LJ, Attenburrow AC, Davidoff RA, Eden OB, Farkouh ME, Feingold KR, Image GW, Jacobson AL, et al. Cardiac iron loading and the studies suggest a useful correlation between myocardial T2* and cardiac function thereby allowing early diagnosis and treatment. Although there is no disputing the clinical merits of CMR-measured myocardial T2* in the evaluation of cardiac function, there may be additional value in knowing the relationship between myocardial T2* and directly measured myocardial iron levels. Validation of myocardial T2* and myocardial tissue iron may not be feasible in humans and may not be required since cardiac iron estimates by MRI in animal models has been validated.4

The Author 2008. For permissions please email: journals.permissions@oxfordjournals.org.

Published on behalf of the European Society of Cardiology. All rights reserved. © The Author 2008. For permissions please email: journals.permissions@oxfordjournals.org.

Online publish-ahead-of-print 2 May 2008

doi:10.1093/eurheartj/ehn189

Online publish-ahead-of-print 2 May 2008

doi:10.1093/eurheartj/ehn190