Letter to the Editor

HLA-B27-associated J-wave — A new variant of HLA-B27-associated cardiac disease?

James Ker *

Department of Physiology, University of Pretoria, PO Box 24318, Gesina, Pretoria 0031, South Africa

In 1973 the strong association between the immunogenetic marker HLA-B27 and ankylosing spondylitis was described [1]. The strength of this association was unprecedented — HLA-B27 incurred a relative risk of more than 100 for ankylosing spondylitis [2].

In 1997 Bergfeldt [2] noted the presence of a cardiac syndrome, consisting of severe conduction system abnormalities plus aortic regurgitation, associated with HLA-B27 — present in 67% to 88% of patients with both these cardiac findings. The strength of this association led him to replace the concept of “cardiac complications of HLA-B27” with the term “HLA-B27-associated cardiac disease” [2]. An increased incidence of arrhythmias was also noted.

In this study it was hypothesized that a high incidence of electrocardiographic abnormalities will be present in patients with the immunogenetic marker HLA-B27. In this retrospective analysis a total of 62 patients with the immunogenetic marker HLA-B27 were identified out of a total of 1500 patient files from a cardiac clinic. Electrocardiographic abnormalities were present in 69% of these patients. Of interest is that the most common electrocardiographic abnormality in this group of patients was J-waves in the inferior electrocardiographic leads, present in 44% of these patients (see Fig. 1).

Tikkanen et al. [3] noted that an early repolarization pattern (J-wave) in the inferior leads of the electrocardiogram is associated with an increased risk of death from cardiac causes in middle aged subjects. Kazmierczak et al. [4] recently published their study on the incidence of cardiac arrhythmias in 31 patients with ankylosing spondylitis and they found a high incidence (55%) of ventricular extrasystoles.

This is the first observation of a high incidence of inferior J-waves — an entity with a proven risk for cardiac death — in patients with the immunogenetic marker HLA-B27.

It is postulated that the same obliteratorive endarteritis and fibrosis which are present in the tissues adjacent to afflicted joints [2] in these patients, are also present in the myocardium and are responsible for the inferior J-waves.

Acknowledgement

The authors of this manuscript have certified that they comply with the Principles of Ethical Publishing in the International Journal of Cardiology [5].

References