Therefore, we believe that the conclusion by Lombardi et al. (1), namely that patients with early recurrence of AF show signs of increased sympathetic modulation, should be toned down.

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REFERENCES


REPLY

The letter of van den Berg and van Gelder questions whether electrical remodeling of the sinus node might affect interpretation of heart rate variability parameters measured after successful cardioversion of chronic atrial fibrillation (AF).

The issue is of relevance and must be considered within a recent number of observations indicating the complexity of the electrical remodeling process in relation not only to AF duration but also to different atrial sites and sinus node involvement.

We have recently reported (1) that after successful electrical cardioversion of chronic AF in patients pre-treated with amiodarone, the presence of a distinct short-term heart rate variability pattern characterized by an low frequency/high frequency (LF/HF) ratio ≥2 is associated with an 8-fold increased risk of early recurrence. In contrast, patients with a LF/HF ratio <2 were more likely to maintain sinus rhythm.

We therefore concluded that signs of increased sympathetic and reduced vagal modulation of the sinus node were characteristic of patients with an early AF recurrence, and we hypothesized that abnormal autonomic control could play a pro-arrhythmic role by influencing electrical remodeling.

We are aware of the data suggesting that, in patients with chronic atrial flutter, signs of electrical remodeling of sinus node can be detected after cardioversion (2). However, in our opinion, it is difficult to evaluate the clinical significance of these findings obtained during pharmacological autonomic blockade and their possible effect on spectral parameters of heart rate variability. Two factors seem to deny this possibility. First, we observed an increase rather than a decrease in low frequency oscillations in patients with early recurrence of atrial fibrillation. This pattern, together with reduction of the high-frequency oscillation, is unlikely to reflect a