Driving and Ventricular Arrhythmia: A Historical Perspective

Albert et al. (1), in their important study on the risk of defibrillator shocks during driving, suggest that their study is “the first to examine the association between driving a car and the onset of ventricular arrhythmias.” There were, in fact, a series of publications, albeit including only a small number of patients, published some 40 years ago and performed in patients with a spectrum of cardiac diseases driving in British traffic (2–4). These studies documented a remarkably high prevalence of ventricular arrhythmias and ST-segment shifts despite the lack of symptoms and even included 1 patient who developed sustained ventricular tachycardia (clearly illustrated in the article but misrepresented as sinus tachycardia) associated with the development of pulmonary edema requiring a hospital stay (4).

The apparent discrepancy between the high prevalence of driving-induced arrhythmia in the early studies and a low frequency of implantable cardioverter-defibrillator shocks in the high-risk population enrolled in the current study is striking. On the assumption that city driving in the U.S. in the 21st century is at least as stressful as it was in central London in the 1960s, one wonders whether the antiadrenergic effect of beta-blockade might account for these differences. However, reference to the authors’ Table 2 indicates this not to be the case, at least in terms of malignant ventricular arrhythmias. The early studies had a high proportion of patients with active angina, whereas nowadays revascularization is the norm in ischemic heart disease. This difference in driving-related arrhythmia points to the powerful role of ischemia in triggering arrhythmias in susceptible patients, highlights how far we have come in the past 40 years, and underscores the enduring value of now-historic studies for gaining insight into potential mechanisms of disease. To paraphrase a well-known saying: “She who knows history may be destined to improve it.”

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