Double atrial potentials recorded in the coronary sinus in patients with Wolff-Parkinson-White syndrome: a possible mechanism of induced atrial fibrillation.

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摘要

Abstract

Background: Double atrial potentials recorded in the coronary sinus are not an unusual phenomenon in patients with supraventricular tachyarrhythmias. They have been demonstrated to potentiate the occurrence of atrial tachyarrhythmias.

Methods: Two hundred and forty-eight patients were included for investigating the presence of double atrial potentials on the coronary sinus recordings during electrophysiologic study. Group 1 consisted of 136 patients with WPW syndrome and group 2 consisted of 112 patients with atrioventricular nodal reentrant tachycardia (AVNRT). Group 1 patients had a higher incidence of induced atrial fibrillation (AF) (27% vs. 15%, P = 0.045) than group 2 patients. In addition, the incidence of double atrial potentials was significantly higher in group 1 than in group 2 patients (14% vs. 2%, P = 0.001). In group 1, 19 patients with double atrial potentials had a significantly higher incidence of left lateral bypass tracts (79% vs. 39%, P = 0.001) and induced AF (47% vs. 22%, P = 0.01) than 117 patients without double atrial potentials.

Conclusions: WPW syndrome, especially with a left lateral bypass tract, had a higher incidence of double atrial potentials and induced AF than AVNRT. WPW patients with double atrial potentials had a higher incidence of induced AF than those without double atrial potentials. These findings may contribute to understanding the mechanism of induced AF in WPW syndrome

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