

Mechanisms of transition between double paroxysmal supraventricular tachycardias

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摘要

Abstract

Double Paroxysmal Supraventricular Tachycardias. Introduction: Coexistence of double tachycardias in one patient has been infrequently reported. Furthermore, the mechanisms of transition between double paroxysmal supraventricular tachycardias have not been well studied. Methods and Results: Thirty-five patients with two paroxysmal supraventricular tachycardias were studied. Group IA consisted of 3 patients with spontaneous transition between AV reciprocating tachycardia (AVRT) and AV nodal reentrant tachycardia (AVNRT). Group IB consisted of 13 patients without spontaneous transition between AVRT and AVNRT. Group IIA consisted of 5 patients with spontaneous transition between AVNRT and atrial tachycardia (AT). Group IIB consisted of 14 patients without spontaneous transition between AVNRT and AT. The absolute values of differences between the two tachycardia cycle lengths were significantly smaller in patients with than in those without transition between the two tachycardias (25 ± 8 msec vs 90 ± 46 msec, $P < 0.05$, IA vs IB; 21 ± 25 msec vs 99 ± 57 msec, $P < 0.01$, IIA vs IIB). The cutoff point of 25 msec had 80% positive predictive value for transition between the two tachycardias. Transition between two tachycardias occurred due to a spontaneous premature atrial complex (30%), conduction block at one limb of tachycardia (20%), or tachycardiainduced tachycardia (50%). Absence of transition between two tachycardias might be explained by the absence of a spontaneous premature atrial complex, longer cycle length of the first tachycardia, larger difference between two tachycardia cycle lengths, or induction of each tachycardia under different situations. Conclusion: Double supraventricular tachycardias with similar tachycardia cycle lengths are vulnerable to transition between different tachycardias.