Comparison of the Clinical Characteristics and Acute Blood Pressure Changes between Atrioventricular Reentrant Tachycardia and Atrioventricular Nodal Reentrant Tachycardia

Tomoyuki Kabutoya, Takeshi Mitsuhashi, Tomonori Watanabe, Rieko Nakagami, Yoshihito Hata, Kazuomi Kario
Jichi Medical University School of Medicine, Japan

Purpose: We aimed to investigate the clinical characteristics and acute blood pressure changes between atrioventricular reentrant tachycardia (AVRT) and atrioventricular nodal reentrant tachycardia (AVNRT).

Methods: One hundred and six patients with inducible hemodynamically tolerated AVRT (N=42) or AVNRT (N=64) were enrolled. Supraventricular tachycardia (SVT) was induced by standard techniques, and if SVT was not induced, isoproterenol was infused to induce SVT (0.5-2.0 mcg/min). Systolic blood pressure (SBP) of the right femoral artery was recorded continuously, and compared at 3-5 and 28-30 seconds among both groups.

Results: The mean age was 49 ± 8 years and 49% of participants were male. The frequency of emergency room visits was higher in patients with AVRT than in patients with AVNRT (32% vs. 12%, p=0.012), and of requirement isoproterenol to induce SVT was higher in patients with AVNRT than in patients with AVRT (43 vs. 7%, p<0.001). SBP was similar in both groups at baseline, but the SBP in patients with AVRT was lower than that in patients with AVNRT at 3-5 seconds and 28-30 seconds after SVT induction (at 3-5 seconds: 93 ± 29 vs. 107 ± 32 mmHg, p=0.021; at 28-30 seconds: 116 ± 28 vs. 128 ± 25 mmHg, p=0.035).

Conclusion: The easy induction of SVT and low SBP might play a role in the greater frequency of emergency room visits in patients with AVRT.

Keyword: supraventricular tachycardia