在老年華人身上血管緊縮素原 G-6A, 血管緊縮素II 第一型受器A1166C 基因多形性和再極化參數的變化 - 4年的追蹤研究

Angiotensinogen and Angiotensin II Type 1 Receptor Gene Polymorphisms and Changes of Repolarization Parameters in Elderly Chinese - 4 Years Follow-up Study

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Background: Ventricular repolarization abnormality plays a crucial role in cardiac arrhythmia. Polymorphisms of renin-angiotensin system genes are associated with occurrence of ventricular arrhythmia. We previously demonstrated that subjects carrying the angiotensin converting enzyme *(ACE)* D-allele but not angiotensinogen (*AGT*) M235T had a higher magnitude of QT dispersion (QTd) prolongation. The aim of this study was to test whether *AGT* [-6G>A] and angiotensin II type 1 receptor *(AT1R)* [1166A>C] genes polymorphism influence repolarization parameters, including QTd and the peak and end of T wave interval (Tpe).

Methods: Of 1500 people screened, 106 normotensive, non-diabetic participants aged 60 and older were recruited. ECGs were recorded at baseline, and in the second and fourth year. QTd and Tpe were manually calculated. Gene polymorphisms were analyzed by the polymerase chain reaction.

Results: Age was 72.7±4.1 years old (range 62-81). QTd and Tpe were significantly prolonged at the 2nd and 4th year (all $p < 0.001$). Neither gene polymorphism is not associated with the magnitude of QTd and Tpe prolongation.

Conclusion: This longitudinal study shows that the *AT1R* [1166A>C] and *AGT* [-6G>A] polymorphisms are not suitable genetic markers to influence the changes of repolarization parameters in this Chinese population in Taiwan.