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THE ROLE OF THE POLYMORPHISM OF CYP2C9 IN PATIENTS WITH ATRIAL FIBRILLATION TREATED IN WARFARIN ANTICOAGULATION THERAPY

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Objective To investigate the polymorphism of CYP2C9 in patients with atrial fibrillation as well as the possible relationship between the individual warfarin dosage requirements and the genetic polymorphism in Chinese patients.

Methods The polymorphism of CYP2C9 in 100 patients with atrial fibrillation in our hospital was detected by using PCR and restriction enzyme digestion. The genotype and allelic frequencies were calculated and the individual warfarin dosage requirements were analysed.

Results In this group of patients CYP2C9*1 allele and CYP2C9*3 were detected, The frequency of *1 allele and *3 allele was 96% and 4%, respectively. Two genotypes were detected as well. CYP2C9*1/*1 was the most common genotype, with the frequency of 92%. The frequency of CYP2C9*1/*3 was 4% in these 100 patients. To achieve similar target INR range (2.0–3.0), variant CYP2C9*1/*3 homozygotes or heterozygotes required lower daily mean maintain doses (2.14±0. 55 mg) than wild-type CYP2C9*1/*1 patients did (3. 17±0. 74 mg).

Conclusion Polymorphism of CYP2C9 is associated with warfarin dose requirements in 100 patients with atrial fibrillation, which is partly the factor causing difference of individual warfarin dosage requirements.