

[gw22-e1023]

GENETIC POLYMORPHISMS OF VKORC1, CYP2C9, CYP4F2 IN BAI-, ZANG-CHINESE

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10.1136/heartjnl-2011-300867.332

This study aims to detect the popular polymorphisms in VKORC1, CYP2C9 and CYP4F2 in Bai-, Zang-Chinese, to start the exploration of better use of warfarin in Chinese minorities.

Methods 370 healthy, unrelated individuals were enrolled, including 131 Han-Chinese, 132 Bai-Chinese and 107 Zang-Chinese. PCR-based methods (PCR-RFLP) were used to analyse VKORC1 3673G>A, CYP2C9*3, CYP4F2 rs2108622 C>T in Han-, Bai- and Zang-Chinese.

Results The differences among the mutation frequencies of the studied genes in three ethnics were not statistically significant. A-allele in VKORC1 3673G>A was quite common in three studied ethnics. *3-allele in CYP2C9*3 was rare. Approximately one third of each ethnic had the mutant T-allele of CYP4F2 rs2108622. However, Bai-Chinese got statistically higher A-allele frequencies of VKORC1 3673G>A than previously studied Han-Chinese did. Also, Zang-Chinese showed significantly lower CYP2C9*3 frequency than combined Han-Chinese, which indicated lower warfarin dose.

Conclusions (1) Attribute to obvious contribution of VKORC1 3673G>A to warfarin dose variation, Bai-Chinese got the potential to benefit more from lower warfarin dose. (2) Due to CYP2C9*3's medium contribution to warfarin dosage variation, moderate adjustment of dosing algorithm or multiple linear regression models is needed for Zang-Chinese in the future.