Worth of genotyping for warfarin therapy unclear

The cost effectiveness of genotype-guided warfarin dosing appears nearly as uncertain as the accuracy of warfarin dosing itself, according to a study presented at the 25th International Conference on Pharmacoepidemiology and Therapeutic Risk Management.

The study investigated the cost effectiveness of CYP2C9 and VKORC1 genotyping for improving the accuracy of warfarin dosing. A state transition model was used to simulate outcomes of patients aged 70 years with newly-diagnosed atrial fibrillation. Bleeding, mortality, costs and other variables were based on published literature.

The cost effectiveness of genetically-guided dosing was found to be highly dependent on assumptions made of its effectiveness. Specifically, if genetic tests guided dosing such that the time spent in the target INR range was increased by < 5%, the incremental cost-effectiveness ratio (ICER) of this strategy was calculated at over $100 000/QALY. If time spent in the target INR range was increased by 9%, however, the ICER reportedly fell below $50 000/QALY. Due to the current uncertainty over such genotyping's efficacy, the researchers urged caution in advocating widespread implementation of this strategy.

Patrick AR, et al. The Cost-Effectiveness of Genotype-Guided Warfarin Dosing for Patients with Atrial Fibrillation. 25th International Conference on Pharmacoepidemiology and Therapeutic Risk Management : abstr. 053, 16 Aug 2009.

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