[P-T-660] DETERMINATION OF VKORC1 AND CYP2C9 GENOTYPES IS OF LIMITED VALUE DURING CHRONIC ANTICOAGULATION WITH ACENOCOUMAROL

C. Lambert, J. Gala, B. Dessomme, V. Deneys, C. Hermans. Haematology; Laboratoy of applied molecular technologies - Center for human genetics; Haemostasis and Thrombosis Laboratory, Cliniques universitaires Saint-Luc, Brussels, Belgium

Introduction: The C1173T VKORC1 and CYP2C9*3 polymorphisms account for up to 50% of the inter-individual variability in the response to vitamin K antagonist (VKA) therapy. Inheritance of these polymorphisms is associated with lower maintenance dose of VKA and over-anticoagulation during induction of treatment. The impact of these polymorphisms on the stability of anticoagulation and the risk of over-anticoagulation in patients on long-term oral anticoagulation is unknown.
Methods: C1173T VKORC1 and CYP2C9*3 polymorphisms were determined in patients treated with acenocoumarol and followed at the anticoagulation clinic of the Cliniques Universitaires Saint-Luc, Brussels, Belgium. Dawn AC software was used to determine acenocoumarol dosage and frequency of blood draws. Only patients adhering strictly to the DAWN recommendations were included. VKA dosages and INR results were analysed after the initiation phase and during uninterrupted and prolonged periods (18±11 months) of anticoagulation.
Results: Of the 92 patients, 58% had a VKORC1 C1173T polymorphism and 11% the CYP2C9*3 allele. As expected, patients with a VKORC1 and CYP2C9*3 polymorphism required 40% lower doses of acenocoumarol than wild-type patients. By contrast, both polymorphisms had no impact on the percentage of INR in the therapeutic range (mean ± SD) (75±13%) and on the number of blood draws performed monthly (2.25±1). Similarly, the number of over-anticoagulation episodes (INR>3) was unaffected by these polymorphisms.
Conclusions: In conclusion, determination of C1173T VKORC1and CYP2C9*3 polymorphisms has no impact on the stability of anticoagulation and the frequency of monitoring of VKA during long-term treatment. To be of value in clinical practice, these polymorphisms should be determined before initiation of VKA therapy in order to identify patients who require lower doses.
Lambert C, Gala J, Dessomme B, Deneys V, Hermans C. DETERMINATION OF VKORC1 AND CYP2C9 GENOTYPES IS OF LIMITED VALUE DURING CHRONIC ANTICOAGULATION WITH ACENOCOUMAROL. *J Thromb Haemost 2007*; **5** Supplement 2: P-T-660

Date: Tuesday, July 10, 2007
Session Info: Poster: Clinical trials: oral anticoagulants incl. New compounds
Room: Exhibition Area