P-glycoprotein: a clue to vitamin K antagonist stabilization

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Abstract

Introduction: Acenocoumarol is a vitamin K antagonist used in some European countries. As warfarin, this drug is characterized by a narrow therapeutic index and a large interindividual variability.

Objective: The objective of this study was to assess the involvement of ABCB1 polymorphisms on acenocoumarol treatment.

Method: An observational cohort study was conducted to assess whether there is an association between the presence of the allelic variants of the ABCB1 gene coding for P-glycoprotein and acenocoumarol stabilization and daily doses during the first 35 days of treatment.

Results: One hundred and fifteen patients met the inclusion criteria. The results of the clinical study showed that carriers of ABCB1 c.3435TT were more rapidly stabilized than wild-type patients (HR: 2.97, 95% CI: 1.23–7.18; p = 0.02). The same tendency was observed for the ABCB1 c.2677GT and 2677TT genotypes compared with ABCB1 c.2677GG. The ABCB1 c.2677TT genotype was also associated with a significant increase in doses of acenocoumarol (p = 0.03), the same tendency was observed with the ABCB1 c.3435TT genotype compared with the wild-type patients.

Conclusion: These data suggest that ABCB1 polymorphisms could be involved in the response to acenocoumarol treatment.


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