Abrupt versus Gradual Withdrawal of Vitamin K Antagonist Treatment in Patients with Venous Thromboembolic Disease: Assessment of Hypercoagulability and Clinical Outcome

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SUMMARY

Background: It is yet unclear whether vitamin K antagonist treatment should be stopped abruptly or gradually after an episode of venous thromboembolism. The mode of withdrawal might influence a potential development of a hypercoagulable state, which could influence the risk for recurrent disease. Methods: We prospectively studied 37 consecutive patients in whom acenocoumarol was discontinued either abruptly (18) or gradually (19) (2/3 and 1/3 of the initial dose for one week). Blood sampling was performed at various time points up to 18 days after complete withdrawal and was analysed for INR, prothrombin fragment F1+2 and D-dimer. All patients were clinically followed-up for the assessment of the association between hypercoagulability and occurrence of disease such as recurrent venous thromboembolism or malignancy. Results: An approximately fourfold increase was observed (median increase from 0.3 to 1.3 mmol/L) in the F1+2 levels after both abrupt and gradual withdrawal and in the D-dimer concentrations in the abrupt withdrawal group (0.10 to 0.44 mg/l), while those in whom acenocoumarol was discontinued gradually showed a less pronounced increase of the D-dimer levels (0.11 to 0.29 mg/L) (not significant). During follow-up one recurrent venous thromboembolic event occurred in each group, and a diagnosis of cancer was made four times. All these patients had the highest D-dimer concentrations measured in the entire study group. Conclusions: This study indicates the potential for a hypercoagulable state after acenocoumarol discontinuation, which was not prevented by tapering the acenocoumarol dose. D-dimer, measured 2 to 3 weeks after acenocoumarol withdrawal, might be an important tool to identify patients at risk for recurrent venous thromboembolism and/or for the presence of an underlying malignancy. (Clin. Lab. 2000;46:575-581)