Physical activity and risk of bleeding in elderly patients taking anticoagulants


BACKGROUND
Although the possibility of bleeding during anticoagulant treatment may limit patients from taking part in physical activity, the association between physical activity and anticoagulation-related bleeding is uncertain.

OBJECTIVES
To determine whether physical activity is associated with bleeding in elderly patients taking anticoagulants.

PATIENTS/METHODS
In a prospective multicenter cohort study of 988 patients aged ≥ 65 years receiving anticoagulants for venous thromboembolism, we assessed patients' self-reported physical activity level. The primary outcome was the time to a first major bleeding, defined as fatal bleeding, symptomatic bleeding in a critical site, or bleeding causing a fall in hemoglobin or leading to transfusions. The secondary outcome was the time to a first clinically relevant non-major bleeding. We examined the association between physical activity level and time to a first bleeding by using competing risk regression, accounting for death as a competing event. We adjusted for known bleeding risk factors and anticoagulation as a time-varying covariate.

RESULTS
During a mean follow-up of 22 months, patients with a low, moderate, and high physical activity level had an incidence of major bleeding of 11.6, 6.3, and 3.1 events per 100 patient-years and an incidence of clinically relevant non-major bleeding of 14.0, 10.3, and 7.7 events per 100 patient-years, respectively. A high physical activity level was significantly associated with a lower risk of major bleeding (adjusted sub-hazard ratio 0.40, 95% confidence interval 0.22-0.72). There was no association between physical activity and non-major bleeding.

CONCLUSIONS
A high level of physical activity is associated with a decreased risk of major bleeding in elderly patients receiving anticoagulant therapy.

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