Influence of regular physical activity on warfarin dose and risk of hemorrhagic complications.

published by arnett on Mon, 09/08/2014 - 10:50am
Title

Influence of regular physical activity on warfarin dose and risk of hemorrhagic complications.
Publication Type

Journal Article
Year of Publication

2014
Authors

Shendre, A, Beasley, TMark, Brown, TM, Hill, CE, Arnett, DK, Limdi, NA
Journal

Pharmacotherapy
Volume

34
Issue

6
Pagination

545-54
Date Published

2014 Jun
ISSN

1875-9114

OBJECTIVE: To determine the influence of regular physical activity on stable warfarin dose and risk of major hemorrhage in patients on chronic anticoagulation therapy.

DESIGN: Regular physical activity (maintained over > 80% of visits) was ascertained by self-report at initiation of warfarin therapy (target international normalized ratio [INR] = 2-3) in 1272 patients, with changes documented at monthly anticoagulation clinic visits in a population-based prospective cohort. Multi-variable linear regression and survival analysis, respectively, were used to assess influence on warfarin and risk of hemorrhage.

SETTING: Outpatient anticoagulation clinic

PARTICIPANTS: 1272 anticoagulated patients

MEASUREMENT AND MAIN RESULTS: There were 683 (53.7%) patients who were regularly physically active (≥ 30 min ≥ 3 times/week). Physically active patients required warfarin doses that were 6.9% higher (p=0.006) than in physically inactive patients after controlling for sociodemographic factors, vitamin K intake, clinical factors, and genetic variations. The overall incidence of major hemorrhagic events was 7.6/100 person-years (p-yrs, 95% confidence interval [CI] 6.4-8.9) in our population. The incidence was lower for physically active patients (5.6/100 p-yrs, 95% CI 4.2-7.2) than in inactive patients (10.3/100 p-yrs, 95% CI 8.2-12.9, p=0.0004). Active patients had a 38% lower risk of hemorrhage (hazard ratio 0.62, 95% CI 0.42-0.98, p=0.03) compared with inactive patients.

CONCLUSIONS: Regular physical activity is
associated with higher warfarin dose requirements and lower risk of hemorrhage. The influence of physical activity on drug response needs to be further explored, and the mechanisms through which it exerts these effects need to be elucidated.