

The risk of falling and falling consequences in patients with atrial fibrillation receiving different types of anticoagulant drugs

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Objective: To investigate predictors of falling requiring visit to emergency department in patients with non-valvular atrial fibrillation (AF) receiving different types of anticoagulants, as well as to investigate clinical consequences of falling in the same population.

Patients and Methods: A total of 1,217 patients with non-valvular AF from two institutions were retrospectively evaluated. Physical examination, clinical history and medications profile were obtained from each patient at baseline.

Results: Median age of our cohort was 71 years. There were 52.3% males and 86.1% patients were receiving anticoagulation at the study baseline. Freedom-from-falling 5-year rate was 81.6%. Use/type of anticoagulation was not significantly associated with the risk of falling ($P=0.222$), whereas higher Morse-Fall-Scale (MFS), CHA2DS2-VASC and HAS-BLED scores were significantly associated with the higher hazard of the first fall in univariate analyses. In the multivariate Cox-regression model MFS, older age, osteoporosis, higher HDL-cholesterol, higher diastolic-blood-pressure, use of amiodarone, use of diuretics, and use of short and medium-acting benzodiazepines were identified as mutually independent predictors of the first fall. A total of 93/163 (57%) patients suffered a bone fracture during the fall. Type of anticoagulation significantly affected survival after the first fall ($P<0.001$) with patients inadequately anticoagulated with warfarin experiencing worse and patients receiving apixaban and dabigatran experienced best survival after the first fall.

Conclusion: Older patients with comorbidities, taking amiodarone, diuretics, and short and medium acting benzodiazepines are under highest risk of falling.¹ Type and quality of anticoagulation do not seem to affect the risk of falling but significantly affect survival after the first fall.

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LITERATURE

1. Jansen S, Frewen J, Finucane C, de Rooij SE, van der Velde N, Kenny RA. AF is associated with self-reported syncope and falls in a general population cohort. *Age Ageing.* 2015 Jul;44(4):598-603. <https://doi.org/10.1093/ageing/afv017>