Outcomes with oral anticoagulation resumption or discontinuation after an anticoagulation-related event in patients with atrial fibrillation

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Funding Acknowledgements: None.

Background: There are uncertainties on the resumption of anticoagulation therapy in patients with non-valvular atrial fibrillation who experience a thrombotic or haemorrhagic event while on oral anticoagulation.

Purpose: We assessed the cumulative incidence of recurrent stroke, major bleeding and all-cause mortality associated with restarting antithrombotic treatment, after stroke or major bleeding during anticoagulation therapy for atrial fibrillation.

Methods: We included anticoagulated patients with atrial fibrillation that were discharged (2013-2020) from hospital for stroke, intracranial haemorrhage (ICH), and major bleeding. To adjust for competing risk of death and reduce confounding, we started the follow up after 120-days blanking period, counting events in patients resuming oral anticoagulation versus those that did not. Risks of all-cause mortality, thromboembolism, intracranial haemorrhage, and major bleeding were estimated with multivariable Cox proportional hazard models and propensity score to adjust for differences in baseline characteristics.

Results: 1029 patients (mean age 77 years) were included in the final cohort: 23% were ischemic stroke, 18% were ICH, and 59% major bleeding; of these, 77% resumed anticoagulation. Among patients with stroke as the index event (92% resumed anticoagulation) the cumulative incidence of events was significantly lower in patients resuming therapy (HR 0.2, 95%CI 0.1-0.4, p<0.01). In patients with ICH (64% resumed therapy) the cumulative incidence of events was lower in patients resuming anticoagulation (HR 0.4, 95%CI 0.2-0.7, p<0.01). Same was true for patients with major bleeding, with patients resuming therapy (76%), experiencing fewer events (HR 0.5, 95%CI 0.2-0.7, p<0.01). In the multivariable analysis considering age, sex and propensity score as covariates, resumption of anticoagulation significantly reduced the cumulative event rate (HR 0.5, 95%CI 0.4-0.6, p<0.01).

Conclusion: In patients with atrial fibrillation who experienced an anticoagulation-related event, resuming oral anticoagulation was associated with better outcomes for all-cause mortality and subsequent events as compared with patients who did not resume treatment.
Stacked Area Charts and Cox regression