Secondary Stroke Prophylaxis Using Alternate Antithrombotic Treatments in Patients with Ischemic Stroke

The effect of alternate antithrombotic treatments in patients who develop ischemic stroke despite the use of direct oral anticoagulants (DOACs) is not clearly understood.

What is the impact of antithrombotic regimen in patients with ischemic stroke while on a DOAC?

Population-based retrospective cohort study

45,946 patients with nonvalvular atrial fibrillation (NVAF) → 2,337 patients who developed ischemic stroke despite using DOACs

Study groups

- Unchanged DOAC regimen (DOAC_same) 70.7%
- DOAC-to-DOAC switch (DOAC_switch) 20.4%
- DOAC-to-warfarin switch 5.2%
- DOAC_same + antiplatelet agents 15.1%

Outcomes after a median follow-up of 16.5 months

- Higher risk of recurrent stroke (compared to DOAC_same)
  - 13.4% of patients had a recurrent episode of stroke
  - Warfarin [8.7% vs 12.6%; aHR 1.96, 95% CI 1.27–3.02; p = 0.002]
  - DOAC_switch [8.7% vs 12.8%; aHR 1.62, 95% CI 1.25–2.11; p < 0.001]

- Adjunctive treatment with an antiplatelet agent
  - Reduced risk of recurrent ischemic stroke [aHR 1.28, 95% CI 0.88–1.84; p = 0.188]

- Intracranial hemorrhage
  - DOAC_switch [aHR 1.06, 95% CI 0.59–1.90; p = 0.837]
  - Warfarin [aHR 1.51, 95% CI 0.64–3.54; p = 0.342]

- Death
  - DOAC_switch [aHR 0.98, 95% CI 0.81–1.19; p = 0.833]
  - Warfarin [aHR 1.36, 95% CI 0.92–2.01; p = 0.122]

Predictors of recurrent stroke

- Diabetes mellitus
- Concurrent cytochrome P450/P-glycoprotein modulators
- Large artery atherosclerotic disease

In patients with NVAF who develop ischemic stroke despite DOACs, switching to warfarin or an alternate DOAC may increase the risk of recurrence.

doi: 10.1212/WNL.0000000000207422
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