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Concomitant Oral Anticoagulant and Nonsteroidal Anti-Inflammatory Drug Therapy in Patients With Atrial Fibrillation

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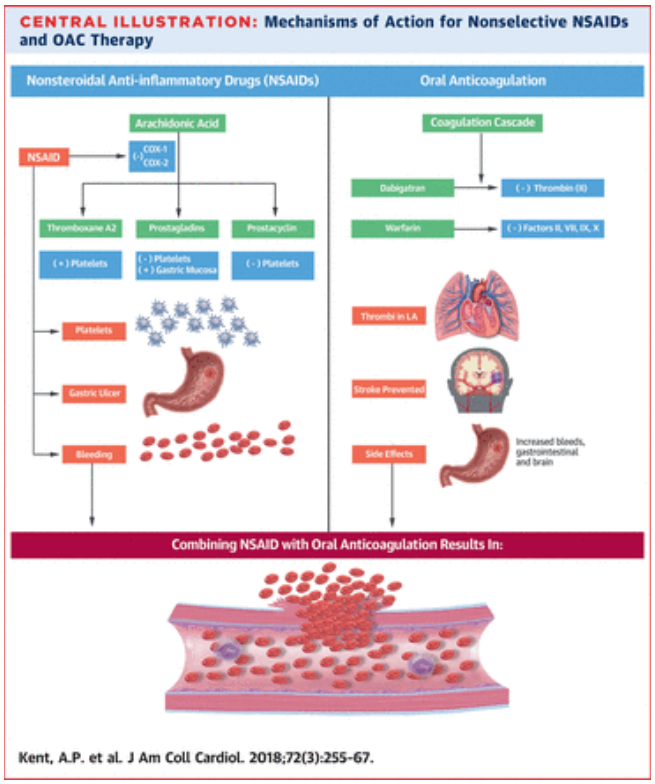
Author + information

Central Illustration



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Abstract

Background Nonsteroidal anti-inflammatory drugs (NSAIDs) are commonly used medications that can potentially increase the risk of bleeding and thrombosis.

Objectives This study quantified the effect of NSAIDs in the RE-LY (Randomized Evaluation of Long Term Anticoagulant Therapy) trial.

Methods This was a post hoc analysis of NSAIDs in the RE-LY study, which compared dabigatran etexilate (DE) 150 and 110 mg twice daily (b.i.d.) with warfarin in patients with atrial fibrillation. Treatment-independent, multivariate-adjusted Cox regression analysis assessed clinical outcomes by comparing NSAID use with no NSAID use. Interaction analysis was obtained from treatment-dependent Cox regression modeling. Time-varying covariate analysis for NSAID use was applied to the Cox model.

Results Among 18,113 patients in the RE-LY study, 2,279 patients used NSAIDs at least once during the trial. Major bleeding was significantly elevated with NSAID use (hazard ratio [HR]: 1.68; 95% confidence interval [CI]: 1.40 to 2.02; $p < 0.0001$). NSAID use did not significantly alter the risk of major bleeding for DE 150 or 110 mg b.i.d. relative to warfarin ($p_{interaction}$ = 0.63 and 0.93, respectively). Gastrointestinal major bleeding was significantly elevated with NSAID use (HR: 1.81; 95% CI: 1.35 to 2.43; $p < 0.0001$). The rate of stroke or systemic embolism (stroke/SE) with NSAID use was significantly elevated (HR: 1.50; 95% CI: 1.12 to 2.01; $p = 0.007$). The use of NSAIDs did not significantly alter the relative efficacy on stroke/SE for DE 150 or 110 mg b.i.d. relative to warfarin ($p_{interaction}$ = 0.59 and 0.54, respectively). Myocardial infarction rates were similar with NSAID use compared with no NSAID use (HR: 1.22; 95% CI: 0.77 to 1.93; $p = 0.40$). Patients were more frequently hospitalized if they used an NSAID (HR: 1.64; 95% CI: 1.51 to 1.77; $p < 0.0001$).

Conclusions The use of NSAIDs was associated with increased risk of major bleeding, stroke/SE, and hospitalization. The safety and efficacy of DE 150 and 110 mg b.i.d. relative to warfarin were not altered. (Randomized Evaluation of Long Term Anticoagulant Therapy [RE-LY]; NCT00262600)

Key Words

anticoagulation **atrial fibrillation** **bleeding** **NSAID** **stroke prevention**

Footnotes

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