

Review: Anticoagulants may be better than antiplatelet agents for non-fatal stroke but not other vascular or fatal events in nonrheumatic AF

Taylor FC, Cohen H, Ebrahim S. Systematic review of long term anticoagulation or antiplatelet treatment in patients with non-rheumatic atrial fibrillation. *BMJ*. 2001 Feb 10;322:321-6.

QUESTION

In patients with nonrheumatic atrial fibrillation (AF), what are the benefits and risks of long-term anticoagulation with warfarin compared with those of antiplatelet treatment with aspirin or indoprofen?

DATA SOURCES

Studies were identified by searching the Cochrane Controlled Trials Register, MEDLINE, EMBASE/Excerpta Medica, CINAHL, and SIGLE up to the end of 1999 with the terms atherosclerosis, atrial fibrillation, myocardial infarction, coronary disease, and anticoagulation and with a filter designed to retrieve randomized controlled trials. Authors were also contacted.

STUDY SELECTION

Randomized controlled trials were selected if patients had nonrheumatic AF and received either anticoagulation or antiplatelet treatment for > 1 year. Trials that evaluated combined use of anticoagulation with antiplatelet drugs were excluded, as were studies that included patients with AF caused by thyrotoxicosis and mitral valve disease or those with heart-valve replacements.

DATA EXTRACTION

Data were extracted on study quality; patient characteristics; intervention, including drug, dose, withdrawals, and duration; international normalized ratio (INR); and outcomes of fatal and nonfatal cardiovascular events (stroke, myocardial infarction, and thromboembolism) and adverse effects, including major bleeding events.

MAIN RESULTS

5 RCTs (3298 patients) met the inclusion criteria. Follow-up ranged from 12 to 42 months. The anticoagulation and antiplatelet

groups did not differ for any outcomes except for a reduction in nonfatal stroke (Table).

CONCLUSION

Long-term anticoagulation may be more effective than antiplatelet treatment for preventing nonfatal stroke but not other vascular events in patients with nonrheumatic AF.

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Oral anticoagulation vs antiplatelet treatment for nonrheumatic atrial fibrillation (mean study follow-up for the 5 trials 12 to 42 mo)*

Outcomes	Odds ratio (95% CI)	RRR (CI)	NNT (CI)
Nonfatal stroke	0.68 (0.46 to 0.99)	31% (1 to 53)	78 (46 to 2500)
All vascular events	0.79 (0.61 to 1.02)	Not significant	Not significant
Fatal stroke	0.74 (0.39 to 1.40)	26% (-39 to 61)	Not significant
Fatal vascular events	0.86 (0.63 to 1.17)	13% (-16 to 35)	Not significant
All-cause mortality	0.94 (0.72 to 1.21)	5% (-19 to 26)	Not significant
		RRI (CI)	NNH
Major bleeding events	1.45 (0.93 to 2.27)	44% (-7% to 121)	Not significant

*Abbreviations defined in Glossary; NNT and its CI calculated from data in article.

COMMENTARY

Taylor and colleagues state that "we would strongly favour antiplatelet drugs in preference to long term anticoagulation." This recommendation is in marked contrast to other publications that strongly recommend oral anticoagulation for patients with AF, especially those at high risk for stroke (the risk for stroke varies markedly among patients with AF) (1, 2). Why the difference?

Taylor and colleagues did not include a large randomized controlled trial of 455 high-risk patients that found a marked decrease in stroke when oral anticoagulation was compared with aspirin (hazard ratio 0.38, CI 0.23 to 0.64, $P < 0.001$) (3). Another randomized controlled trial not included compared adjusted-dose warfarin (INR 2.0 to 3.0) with aspirin plus fixed low-dose warfarin in high-risk patients and found a marked benefit of adjusted-dose warfarin (annual stroke rate 1.9% vs 7.9%) (4). Because the addition of low-dose warfarin to aspirin would, if anything, be more efficacious than aspirin alone, this study provides more evidence supporting the considerably greater efficacy of oral anticoagulation. Previous reviews focused on stroke prevention; Taylor and colleagues place more emphasis on a constellation of vascular events, including stroke, myocardial infarction, thromboembolism, and vascular death.

When all studies are considered, I believe that the evidence supporting the greater efficacy of oral anticoagulation over aspirin is

compelling and that this benefit is clinically important, particularly in patients with AF who are at high risk for cardioembolic stroke (5). Aspirin is the preferred choice in patients with AF who are at low risk for stroke.

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References

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Authors' response

Comparison of fatal events provides the most robust evidence of whether anticoagulation is better than aspirin because biased ascertainment is less likely. We feel that clinicians would be misguided to base treatment decisions on a marginally significant finding for nonfatal stroke. (See also Letter to the Editor in this issue.)