



Arrhythmias

PICKING THE BEST NOVEL ORAL ANTICOAGULANT FOR ATRIAL FIBRILLATION: EVIDENCE FROM A WARFARIN-CONTROLLED NETWORK META-ANALYSIS

ACC Moderated Poster Contributions
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Background: Warfarin is a mainstay atrial fibrillation (AF) treatment, yet it has a narrow therapeutic window. Novel agents have been successfully tested against warfarin, yet no direct comparison among them is available. We thus performed a pair-wise and warfarin-adjusted network meta-analyses of novel oral anticoagulants for AF.

Methods: CENTRAL, Google Scholar, MEDLINE/PubMed and Scopus were searched for randomized warfarin-controlled trials of novel anticoagulants for non-valvular AF (updated September 2011). The primary end-point was stroke/systemic embolism at the longest available follow-up. Odds ratios (OR) with 95% intervals were computed with RevMan and WinBUGS using intention-to-treat data.

Results: From 7114 citations, 7 trials (52701 patients) were included, focusing on apixaban, dabigatran, edoxaban and rivaroxaban. Studies were largely similar, despite a higher baseline risk of patients in the rivaroxaban trial. Pair-wise meta-analysis showed that after a weighted average of 23 months these novel drugs lead to significant reductions in the risk of stroke/systemic embolism (OR=0.81 [0.71-0.92]) and all cause death (OR=0.88 [0.82-0.95]) in comparison to warfarin. Head-to-head comparisons showed that apixaban and dabigatran proved similarly superior to warfarin in preventing stroke/systemic embolism (OR=0.78 [0.62-0.96] for apixaban and OR=0.66 [0.52-0.84] for high-dose dabigatran vs warfarin; OR for head-to-head comparison=1.17 [0.85-1.63]), but apixaban was associated with fewer major bleedings (OR=0.73 [0.57-0.93]) and drug discontinuations (OR=0.64 [0.52-0.78]) than dabigatran. Rivaroxaban did not reduce stroke/systemic embolism (OR=0.87 [0.71-1.07]) or major bleedings in comparison to warfarin (OR=0.87 [0.71-1.07]) and was associated with more major bleedings in comparison to apixaban (OR=1.52 [1.19-1.92]). Data for edoxaban were inconclusive.

Conclusion: Novel oral anticoagulants represent a paradigm shift in the management of AF. Apixaban and dabigatran are both superior to warfarin for the prevention of thromboembolism, but apixaban appears to be better tolerated and associated with reduced bleeding when compared with dabigatran.