Abstract: 
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Comparative effectiveness and safety of non-vitamin K oral anticoagulants and warfarin in non-valvular atrial fibrillation - a cohort study in 3 Nordic countries

Authors:
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Topic(s):
Anticoagulants

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Funding Acknowledgements:
This study was funded by the Pfizer/Bristol-Myers Squibb Alliance.

BACKGROUND: Non-vitamin K oral anticoagulants (NOACs) are an alternative to warfarin in the prevention of stroke in non-valvular atrial fibrillation (NVAF). Nordic countries have high quality of warfarin treatment, making them an especially suitable setting for assessing effectiveness and safety of NOACs against warfarin.

PURPOSE: The BEYOND Pooled (BEnefit of NOACs studY of nOn-valvular AF patieNts in NorDic countries) study compared risks of ischaemic or haemorrhagic stroke/systemic embolism (S/SE), and risk of bleeding with acute hospitalisation with an overnight stay (bleeding) in NVAF patients treated with apixaban, dabigatran or rivaroxaban, each compared with warfarin treatment.

METHODS: A cohort study of treatment-naïve adult NVAF patients dispensed apixaban, dabigatran, rivaroxaban or warfarin was identified from 01 Jan 2013 to 31 Dec 2016. The population and study variables were identified from national registries in Denmark, Norway and Sweden. After 1:1 propensity score (PS) matching for each NOAC-warfarin comparison, individual-level data were pooled across the countries. Cox proportional-hazards regression was used to estimate adjusted hazard ratios (aHRs) of the endpoints.

RESULTS: PS matched NOAC cohort sizes were: apixaban (55,696) dabigatran (28,526) and rivaroxaban (30,701), and the total follow-up in the PS-matched population was 291,171 years (mean 1.3 years). During the follow-up, 35,450 oral anticoagulation (OAC) patients had a S/SE and 38,620 OAC patients had bleeding. Adjusted HRs for the two endpoints are presented in the table. PH assumption has not been formally tested but cum incidence curves did not indicate substantial differences in the effects over time.

CONCLUSIONS: Relative to warfarin, apixaban and dabigatran were associated with lower rates of bleeding whereas rivaroxaban was associated with a higher rate. The three NOACs had comparable rates of stroke and systemic embolism relative to warfarin.

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<th>Endpoint</th>
<th>Apixaban vs Warfarin: aHR (95% CI)</th>
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Adjusted hazard ratios (aHR) of stroke/systemic embolism and bleeding for non-vitamin K oral anticoagulants versus warfarin.