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MINI-FOCUS ISSUE: BLEEDING, THROMBOSIS, AND ATRIAL FIBRILLATION

ORIGINAL RESEARCH

Effectiveness and Safety of Rivaroxaban and Low Molecular Weight Heparin in Cancer-Associated Venous Thromboembolism

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ABSTRACT

BACKGROUND Direct-acting oral anticoagulants (DOACs) are alternatives to low molecular weight heparin (LMWH) in most cancer-associated thrombosis (CAT) patients.

OBJECTIVES This study sought to compare the effectiveness and safety of rivaroxaban and LMWH for venous thromboembolism (VTE) treatment in patients with an active cancer type not associated with a high risk of DOAC bleeding.

METHODS An analysis of electronic health records from January 2012 to December 2020 was performed. Patients were adults, had active cancer, experienced an index CAT event, and were treated with rivaroxaban or LMWH. Patients with cancers with an established high risk of bleeding on DOACs were excluded. Baseline covariates were balanced using propensity score–overlap weighting. HRs with 95% CIs were calculated.

RESULTS We identified 3,708 CAT patients treated with rivaroxaban (29.5%) or LMWH (70.5%). The median (25th-75th percentiles) time on anticoagulation was 180 (69-365) and 96 (40-336) days for rivaroxaban and LMWH patients. At 3 months, rivaroxaban was associated with a 31% reduced risk of recurrent VTE vs LMWH (4.2% vs 6.1%; HR: 0.69; 95% CI: 0.51-0.92). No difference in bleeding-related hospitalizations or all-cause mortality was observed (HR: 0.79; 95% CI: 0.55-1.13 and HR: 1.07; 95% CI: 0.85-1.35, respectively). Rivaroxaban reduced the recurrent VTE risk (HR: 0.74; 95% CI: 0.57-0.97) but not bleeding-related hospitalizations or all-cause mortality at 6 months. At 12 months, no difference was observed between cohorts for any of the previously mentioned outcomes.

CONCLUSIONS Among active cancer patients experiencing VTE and not at high risk of bleeding on DOACs, rivaroxaban was associated with a reduced risk of recurrent VTE versus LMWHs at 3 and 6 months but not 12 months. (Observational Study in Cancer-Associated Thrombosis for Rivaroxaban-United States Cohort [OSCAR-US]; NCT04979780) (J Am Coll Cardiol CardioOnc 2023;5:189–200) © 2023 The Authors. Published by Elsevier on behalf of the American College of Cardiology Foundation. This is an open access article under the CC BY-NC-ND license (http://creativecommons.org/licenses/by-nc-nd/4.0/).

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