It is unclear if direct oral anticoagulant (DOAC) is efficacious and safe for prophylaxis of venous thromboembolism (VTE) in ambulatory patients with cancer” Li et al (2019).

Abstract:

BACKGROUND: It is unclear if direct oral anticoagulant (DOAC) is efficacious and safe for prophylaxis of venous thromboembolism (VTE) in ambulatory patients with cancer.

METHODS: We performed a systematic review using EMBASE, MEDLINE, and CENTRAL. Inclusion criteria included adult ambulatory patients with cancer, prophylactic use of DOAC, and randomized controlled trials (RCT). Exclusion criteria included pediatric patients, inpatient or post-operative setting, therapeutic indication of DOAC, or non-phase III RCT. Two authors screened/reviewed articles and abstracted the data. Meta-analysis was performed using random-effects model. Efficacy outcome included overall and symptomatic VTE incidence during the first six months. Safety outcomes included major bleeding and clinically relevant non-major bleeding (CRNMB) incidence during the on-treatment period. Subgroup analysis was performed for intermediate- and high-risk Khorana Score.

RESULTS: A total of 202 records were identified and 28 full-text articles were assessed. Two studies with 1415 participants were included for meta-analysis. For DOAC versus placebo, the relative risks (RR) for overall and symptomatic VTE incidence by six months were 0.56 (0.35-0.89) and 0.58 (0.29-1.13), respectively. The RR for major bleeding and CRNMB while
on-treatment were 1.96 (0.80-4.82) and 1.28 (0.74-2.20), respectively. Patients with high-risk Khorana score (3+) derived the largest absolute risk reduction of VTE.

CONCLUSIONS: Low-dose DOAC reduces the rate of overall VTE in higher-risk cancer patients starting systemic chemotherapy. It may reduce the rate of symptomatic VTE but increase the likelihood of bleeding.

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