Rivaroxaban as thromboprophylaxis improves clinical outcomes after COVID-19 hospitalization

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For patients at high risk for venous thromboembolism (VTE) discharged after COVID-19 hospitalization, thromboprophylaxis with rivaroxaban is associated with improved clinical outcomes, according to a study published online Dec. 15 in *The Lancet*.

Eduardo Ramacciotti, M.D., from the Science Valley Research Institute in São Paulo, Brazil, and colleagues conducted a multicenter randomized trial involving patients hospitalized with COVID-19 at increased risk for VTE who were randomly assigned to receive 35 days of rivaroxaban 10 mg/day (160 patients) or no anticoagulation (160 patients) at hospital discharge.

During hospitalization, all patients received thromboprophylaxis with standard doses of heparin. Fifty-two percent of patients were in the intensive care unit while hospitalized. Overall, 62 percent of patients had an International Medical Prevention Registry on Venous Thromboembolism (IMPROVE) VTE score of 2 to 3 and elevated D-dimer levels; 38 percent had a score ≥4. The researchers found that the primary efficacy outcome (a composite of symptomatic or fatal VTE, asymptomatic VTE, symptomatic arterial thromboembolism, and cardiovascular death at day 35) occurred in 3 percent and 9 percent of patients assigned to rivaroxaban and no anticoagulation, respectively (relative risk, 0.33). Neither group had any major bleeding. Two patients in the rivaroxaban group had allergic reactions.

"The use of extended prophylactic-dose rivaroxaban should be considered at hospital discharge as an attractive strategy to improve clinical outcomes in patients with creatinine clearance of more than 30 mL/minute who were hospitalized with COVID-19 and an IMPROVE VTE score 2 to 3 plus increased D-dimer levels or an IMPROVE VTE score of 4 or more," the authors write.

Several study authors disclosed financial ties to pharmaceutical

companies, including Bayer, which manufactures rivaroxaban and funded the study.

More information: Study: Eduardo Ramacciotti et al, Rivaroxaban versus no anticoagulation for post-discharge thromboprophylaxis after hospitalisation for COVID-19 (MICHELLE): an open-label, multicentre, randomised, controlled trial, *The Lancet* (2021). DOI: 10.1016/S0140-6736(21)02392-8

Editorial: Charlotte A Bradbury et al, Anticoagulation in COVID-19, *The Lancet* (2021). DOI: 10.1016/S0140-6736(21)02503-4