To assess the preventive effects of the anticoagulants rivaroxaban and low molecular weight heparin (LMWH) on UEVT in patients receiving chemotherapy through PICCs” Lv et al (2019).

Abstract:

Peripherally inserted central catheter (PICC) is often applied in chemotherapy patients and commonly causes upper extremity venous thrombosis (UEVT), which should be prevented. To assess the preventive effects of the anticoagulants rivaroxaban and low molecular weight heparin (LMWH) on UEVT in patients receiving chemotherapy through PICCs. A total of 423 chemotherapy patients with continuous PICC use between January 2014 and June 2015 at the Oncology Department of Dongying People’s Hospital were divided into 3 groups: rivaroxaban (10 mg/day, orally), LMWH (Enoxaparine, 4000 anti-Xa IU/day, subcutaneous injection), and control (no anticoagulant). UEVT incidence and other complications during PICC use were observed and recorded. The rivaroxaban, LMWH, and control groups included 138 (79 males; 54.9±11.0 years), 144 (76 males; 56.0±10.9 years), and 141 (71 males; 53.3±10.9 years) patients, (P = .402 and P = .623 for age and sex respectively). There were no differences in cancer location (P = .628), PICC implantation site (P > .05), body mass index (BMI) (P = .434), blood pressure (all P > .05), blood lipids (5 laboratory parameters included, all P > .5), smoking (P = .138), history of lower limb venous thrombosis (P = .082), and 10 other associated comorbidities (all P > .5). Twenty-nine patients withdrew from the study (5 from the rivaroxaban, 12 from the LMWH, and 12 from the control groups, respectively), and 394 patients were analyzed. There were significant differences in the rivaroxaban group and the
LMWH group compared to the control group (P = .010 and P = .009, respectively), but no significant difference was observed between the rivaroxaban group and the LMWH group (P = .743). Anticoagulants such as rivaroxaban and LMWH may reduce the incidence of PICC-related UEVT in patients receiving chemotherapy.

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