

Prevention of healthcare-associated venous thromboembolism through strictly implementing VTE prevention guidelines in hospitalized medical patients: a cross-sectional study

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Background: It is estimated that over half of hospitalized medical patients are at risk for VTE, including DVT and PE. PE is widely believed to be the most common preventable cause of hospital death if appropriate prophylaxis measures are implemented according to society and/or hospital guidelines. Our aim was to investigate whether VTE prophylaxis was implemented based on updated society and hospital guidelines by medical trainees at UH.

Methods: Patient demographic data (age, gender, height, weight) and possible factors affecting guideline applications (BMI, level of care, creatinine clearance, acute bleeding, malignancy, contraindications, current anticoagulant use) were collected and investigated in patients admitted to the teaching teams from 3/21/2022-to 3/27/2022 at UH.

Results: A total of 111 patients, 72 males and 39 females, ages ranging from 19 to 89 years were included in this cross-sectional study. We found that anticoagulants were correctly ordered in 77.5% (25/111) of the patients based on society and/or hospital guidelines. Further study showed significant factor affecting wrong AC was CrCl (24/25, $P < 0.05$). Guidelines are applied more accurately in patients with current AC use (27/28, $P < 0.05$), with clear contraindications (15/15, $P < 0.05$), and in ICU patients (23/25, $P < 0.05$). There was no significant difference in age, gender, and BMI.

Conclusions: VTE prophylaxis with the correct formula and dose is effective at preventing avoidable death, disability, and chronic ill health in at-risk hospitalized medical patients. Increased awareness and special attention should be paid to CrCl to improve the accuracy by strict guideline application, thus enhancing patient safety and standard of care.