Patten of Heparin Dosing as Venous Thromboembolism Prophylaxis in Adult Underweight Patients Admitted to Critical Care Units at a Tertiary Hospital

Authors: Nouf Al Harthi

Abstract : Venous thromboembolism (VTE) is one of the most common causes of hospital-related deaths in critically ill patients. Guidelines recommended VTE prophylaxis with standardized, fixed doses for most patients. The underweight population has limited data to guide the appropriate drug and dosing regimen. The aim of this study was to describe the pattern of VTE prophylaxis dose regimens for underweighted critically ill adult patients and the prevalence of associated VTE and bleeding. This study is a retrospective cohort study, conducted in King Abdulaziz Medical City, Saudi Arabia. It included all critical patients admitted to the intensive care units and were above 14 years old with weight less than 50 kg or BMI of 18.5 kg/m2 or less and were on heparin as VTE prophylaxis for more than 72 hours from January 2016 until January 2020. After screening 270 patients, only 40 patients were included in this study according to our inclusion and exclusion criteria. Only 6 patients (15%) received VTE prophylaxis as an adjusted dose of heparin 2500 U Q12, while the rest of the patients were taking standard dosing of heparin, 5000 U Q12 was given to 21 (52.50%) patients and 5000 U Q8 was given to 13 (32.50%) patients. None of the adjusted doses developed any complications such as VTE or bleeding. There was no significant difference compared with the standard dose group. This study focused on describing the pattern of heparin doses as VTE prophylaxis in underweight patients. We also compared the standard dosing and adjusted dosage of VTE prophylaxis on underweight patients and any complications. There was no significant difference in the complication's outcome or benefits between the two groups.

Keywords: venous thromboembolism prophylaxis, heparin, underweight patients, adult, critical care units

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