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Comparison of Hemostatic Outcomes in Patients Receiving Fixed-Dose vs. Weight-Based 4-Factor Prothrombin Complex Concentrate

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Four-factor prothrombin complex concentrate (4F-PCC) is a blood coagulation product indicated for urgent reversal of warfarin. Currently there are no studies using 4F-PCC as a fixed dose to achieve haemostasis with warfarin as well as direct factor Xa (FXa) inhibitors. The aim of this study was to evaluate the efficacy and safety of 4F-PCC using a fixed dose of approximately 2000 units of factor IX (FIX) to achieve haemostasis in anticoagulated patients compared with a dose of 4F-PCC based on patient's weight. The authors performed a retrospective, single-centre cohort study at a tertiary care hospital with 433 beds in central Kentucky. Patients who received care at the hospital between 1 January 2014 and 31 December 2018, were 18 years or older and received 4F-PCC for haemostasis of oral anticoagulation were included in the study. Efficacy was assessed by determining if clinically effective haemostasis was achieved after receiving a fixed dose compared with a weight-based dose of 4F-PCC. In the study, 72 patients were included; 38 received weight-based dosing and 34 received a fixed dose. The results reported no statistically significant difference in clinically effective haemostasis using fixed-dose compared with weight-based dosing (91.2% vs. 78.9%, respectively; $P=0.150$). There was no significant difference in adverse events, length of stay or in-hospital mortality between groups. However, significant acquisition cost savings was reported with a fixed-dose regimen. The authors conclude that a fixed-dose regimen of approximately 2000 FIX units of 4F-PCC may be a reasonable approach to achieve haemostasis in patients receiving warfarin or FXa inhibitors. Furthermore, the use of a fixed-dose regimen may lead to significant acquisition cost savings.