**Stability of FV, FVII and FVIII in Post-Thaw Plasma Units during Refrigerated**

**Storage for 5 Days**

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**ABSTRACT**

**OBJECTIVES:** To measure the coagulation Factor V (FV, proaccelerin), FVII (proconvertin), and FVIII (antihemophilic factor) levels as well as haemostatic integrity of single-donor FFP (fresh frozen plasma) units during 5 days storage at 2-6°C and also to compare factor levels between different days.

**STUDY DESIGN:** A cross-sectional analytical study.

**PLACE AND DURATION:** Department of Hematology, University of Health Sciences Lahore from 1st July, 2015 to 30th June, 2016.

**METHODOLOGY:** Total 35 FFP units of AB positive blood group from male donors were aliquoted and stored at −70 °C. Aliquots were thawed at 37 °C and stored at 2–6 °C for 5 days. Prothrombin time (PT), activated partial thromboplastin time (APTT) and FV, VII and VIII levels were assessed during 0, 1, 3 and 5 days.

**RESULTS:** The PT, international normalized ratio (INR) and APTT levels increased with time whereas FV and VIII levels decreased on day 1, 3 and 5 when compared to day zero. A maximum reduction was noted for FV (54%) and FVIII (56%) levels. FVII levels were reduced (31%) less as compared to labile coagulation factors and the statistically significant difference was observed on 3rd and 5th day when compared to day zero.

**CONCLUSION:** The levels of FV,VII, VIII remained within normal range for 3 days in thawed plasma stored at 2-6oC, which supports that plasma not used after thawing can be relabeled as Thawed Plasma and utilized in emergency situations.

**KEYWORDS:** Coagulation; Fresh Frozen Plasma; Plasma Storage; Prothrombin Time; Activated Partial Thromboplastin Time; Thawed Plasma

**HOW TO CITE THIS:**

Khan S, Hameed A, Bashir S, Aftab I, Khan FS, Mustafa G et. al. Stability of FV, FVII And FVIII in Post-Thaw Plasma Units During Refrigerated

Storage For 5 Days Running Title: FV, FVII And FVIII Stability In Post-Thaw Plasma. Isra Med J. 2018; 10(2): 96-101.