References
1) Spahn DR, Bouillon B, Cerny V, et al: Management of bleeding and coagulopathy following major trauma: an updated European guideline. Crit Care 2013;17:R76.
2) Morel N, Delaunay F, Dubuisson V: Management of bleeding following major trauma: is a target haemoglobin of 7 to 9 g/dl high enough? Crit Care. 2013;17:442.

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Trauma-induced coagulopathy - prothrombin complex concentrate vs fresh frozen plasma

O. Tarabrin, S. Shcherbakow, D. Gavrychenko, G. Mazurenko, V. Ivanova, O. Chystikov
Odessa National Medical University, Odessa, Ukraine
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Introductions: The mortality in the in patients with traumatic injuries in a case of bleeding is the most frequent cause of preventable death after severe injury.
Methods: The study involved 91 patients who entered the Odessa Regional Hospital with traumatic injuries: concomitant skeletal trauma, fractures of femur and humerus. Patients were divided into 2 groups: 1st group (n = 46) as a treatment was received PCC in a dose of 1 ml/kg (25 IU/kg) and TXA in a loading dose of 1 g during 10 minutes followed by an infusion of 1 g during 8 hours at time of admission to the intensive care unit (ICU); 2nd group (n = 45) received FFP in a dose of 15 ml/kg and TXA in a loading dose of 1 g during 10 minutes followed by an infusion of 1 g during 8 hours. Evaluation of the functional state of the hemostasis system was carried out using low-frequency piezoelectric thromboelastography (LPTEG) on admission to hospital and 24 hours after the patient's admission to the ICU.
Results: According to LPTEG indicators traumatic injuries patients has a statistically significant abnormalities in all parts of hemostatic system: platelet aggregation - Intensity of contact coagulation (ICC), the coagulation - Intensity of coagulation drive (ICD), clot maximum density (MA) and fibrinolytic activity - Index of retraction and clot lysis (IRCL). ICC in patients with traumatic injuries was reduced by 29.59 %, ICD was less than normal at 37.59 %, MA was reduced by 74.71 %, which showed coagulopathy, IRCL was 90,78 % above the norm, which stands expressed hyperfibrinolysis. Patients of 1st group according to LPTEG had significant changes in all parts of coagulation 24 hours after the intensive care. Indicators of platelet hemostasis characterized by persistence of hypoagregation: ICC was reduced by 24.71 %, compared to the norm; parameters of coagulation and fibrinolysis have reliable trend toward normal and decreasing the activity of fibrinolysis index reaches normal reference values. Patients of 2nd group have hypoagregation and hypocoagulation state with decreased active of fibrinolysis: ICC was reduced by 24.72 %, ICD reduced by 20.76 %, MA was reduced by 23.54 %, IRCL was in the normal range. Clinically, patients of the 1st group had reducing the volume of blood transfusions as opposed to the 2nd group.
Conclusions: Patients with trauma-induced coagulopathy have violation in all parts of hemostatic system. The use of prothrombin complex concentrate and tranexamic acid can reduce the severity of pathological changes in the hemostasis in patients with traumatic injuries.

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First study to prove the superiority of prothrombin complex concentrates on mortality rate over fresh frozen plasma in patients with acute bleeding

C. Plourde, J. Lessard, J. Chauny, R. Daoust
Hopital Sacré-Coeur de Montréal, Montreal, Canada
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Introductions: Prothrombin complex concentrates (PCC) proved its efficiency over fresh frozen plasma (FFP) in achieving faster coagulopathy reversal and many other factors. However, a recent Cochrane review/analysis found no superiority of PCC over FFP on mortality. Additional research is needed to determine the impact of PCC on mortality.
Methods: This retrospective cohort study enrolled adults presenting to the emergency department of a tertiary-care center between March 2008 and February 2015. All patients had evidence of acute bleeding from any source, were anticoagulated with vitamin K-antagonist and received vitamin K upon arrival. We compared mortality rates between FFP and PCC using the Kaplan Meier survival curve and a Cox multivariate regression.
Results: We identified 633 patients: 289 (45.7 %) received FFP and 344 (54.3 %) received PCC. Subjects treated with the FFP compare to PCC increase their probability of mortality during the follow up period (HR = 1.6 (95%CI: 1.2-2.1); p = 0.002) after controlling for confounding variables.
Conclusions: This study confirms the decrease in mortality over a 3 years follow up associated with PCC use compared to FFP in patients presenting for any type of acute bleeding. PCC should be used as a first line therapy for anticoagulation reversal of vitamin k antagonist.

References
Josepg B, Neurosurgery, 2015
Goldstein J, Lancet ,2015
Johansen M, The Cochrane Database, 2015

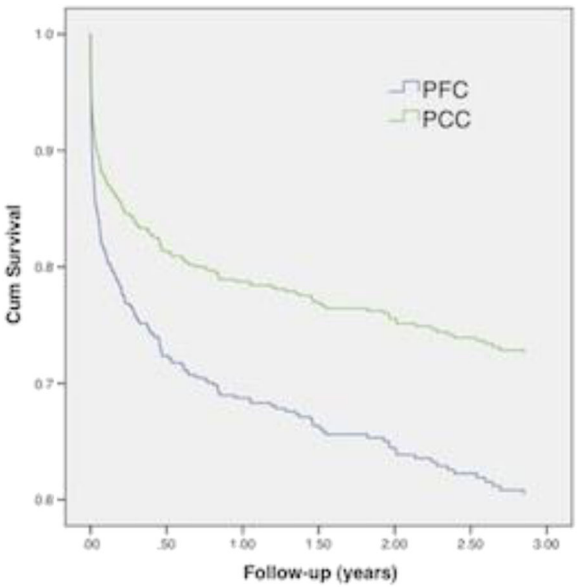

Fig. 22 (Abstract P120).

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Prothrombin complex concentrate vs fresh frozen plasma in obstetric massive bleeding

S. Shcherbakow, O. Tarabrin, D. Gavrychenko, G. Mazurenko, O. Chystikov
Odessa National Medical University, Odessa, Ukraine
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Introductions: In the developing world about 1.2 % of deliveries are associated with postpartum haemorrhage (PPH) and when PPH occurred about 3 % of women died.
Methods: Our research involved 51 patients with massive postpartum bleeding after Ñesarean section that were divided into 2 groups: 1st group contained 10 patients as a treatment of massive bleeding with coagulopathy was scheduled PCC in a dose of 1 ml/kg (25 IU/kg), packed red blood cells (PRBC), 2nd group (41 patients) received fresh frozen plasma(FFP) in a dose of 20 ml/kg and PRBC. The functional state of the hemostasis system was carried out using low-frequency pyezoelectric thromboelastography(LPTEG) on admission to hospital and every 2 hours after admission.
Results: According to LPTEG indicators patients with massive postpartum bleeding had abnormality in all parts of hemostatic system: