

ABSTRACT

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TITLE: Intensive medicine II – Life threatening bleeding and hemorrhagic shock

FORM: Master Thesis

NAME OF UNIVERSITY: Charles University in Prague, Faculty of Pharmacy in Hradec Králové

DEGREE: Pharmacy

KEY WORDS: Life threatening bleeding, coagulopathy, alternative solutions, transfusion preparations, crystalloid, disseminated intravascular coagulation, shock, peripartum bleeding

GOAL: The goal of thesis was to gather and analyse current information about pathophysiology and life threatening bleeding treatment options with focus on liquid shock treatment, prevention and treatment for coagulation disorder during hemorrhagic shock.

MAIN FINDINGS: Life threatening bleeding often comes of polytrauma and in relation to childbirth. It is connected with many complications. Restoring of hemostatic mechanisms includes correction of hypothermia, acidosis and other homeostasis parameters. Bleeding source examination, circulating volume substitution and support of organic functions are inseparable part of methods to support coagulation. The goal of these measures is to prevent the progress of hemorrhagic shock related to multi-organ failure.

Fresh frozen plasma, thrombocyte concentrates, transfusion preparations containing fibrinogen and coagulation factors concentrates are widely used means to support coagulation. From the last-named preparations NovoSeven® and Prothromplex have a rising importance in the Czech Republic. Alternative solutions which function as fast refill of intravascular volume also have their place. Their application is often connected to dilution coagulopathy. Non-pharmacological methods of treatment have a broad use in peripartum bleeding (bimanual compression of the uterus, uterine tamponade, balloon tamponade, selective arterial embolization).

CONCLUSION: Life threatening bleeding is a present issue. Recommended methods dealing with life threatening bleeding are constantly changing. The experience with new preparations contributes to that. The approach to resolve specific cases can be different considering a seriousness of injury, age or current medication.