

## Massivtransfusion – logistische und therapeutische Aspekte

1. Arbeitsgemeinschaft Der Wissenschaftlichen Medizinischen Fachgesellschaften e.V. (AWMF) (2016) Überarbeitete S3-Leitlinie „Polytrauma / Schwerverletzten-Behandlung“ 012-019. Erreichbar unter: <http://www.awmf.org/leitlinien/detail/II/012-019.html>. Zugriff am: 12.02.2017
2. ASA (American Society of Anesthesiologists) (2015) Practice guidelines for perioperative blood management: an updated report by the american society of anesthesiologists task force on perioperative blood management\*. Anesthesiology 122:241-275
3. Boffard KD, Choong PIT, Kluger Y et al. (2009) The treatment of bleeding is to stop the bleeding! Treatment of trauma-related hemorrhage. Transfusion 49:240S-247S
4. Brooke M, Yeung L, Miraflor E et al. (2016) Lactate predicts massive transfusion in hemodynamically normal patients. J Surg Res 204:139-144
5. Bundesärztekammer (BÄK, German Medical Association), (2014) Querschnittsleitlinien der BÄK zur Therapie mit Blutkomponenten und Plasmaderivaten. 4. überarbeitete und aktualisierte Auflage 2014. Erreichbar unter: [http://www.bundesaerztekammer.de/fileadmin/user\\_upload/downloads/QLL\\_Haemotherapy\\_2014.pdf](http://www.bundesaerztekammer.de/fileadmin/user_upload/downloads/QLL_Haemotherapy_2014.pdf). Zugriff am: 09. Dec 2015
6. Funk M, Heiden M, Volz-Zang C (2017) Hämovigilanz-Bericht des Paul-Ehrlich-Institutes 2015. Auswertung der Meldungen von schweren Reaktionen und Zwischenfällen nach §63i AMG. Erreichbar unter: <http://www.pei.de/DE/ärzneimittelsicherheit-vigilanz/haemovigilanz/haemovigilanzberichte/haemovigilanzberichte-node.html>. Zugriff am: 02. Jul 2017
7. Gonzalez E, Moore EE, Moore HB et al. (2016) Goal-directed Hemostatic Resuscitation of Trauma-induced Coagulopathy: A Pragmatic Randomized Clinical Trial Comparing a Viscoelastic Assay to Conventional Coagulation Assays. Ann Surg 263:1051-1059
8. Gustafson ML, Hollosi S, Chumbe JT et al. (2015) The effect of ethanol on lactate and base deficit as predictors of morbidity and mortality in trauma. Am J Emerg Med 33:607-613
9. Haas T, Fries D, Tanaka KA et al. (2015) Usefulness of standard plasma coagulation tests in the management of perioperative coagulopathic bleeding: is there any evidence? Br J Anaesth 114:217-224
10. Hess JR, Holcomb JB (2015) Resuscitating PROPPRly. Transfusion 55:1362-1364
11. Hodgetts TJ, Mahoney PF, Russell MQ et al. (2006) ABC to <C>ABC: redefining the military trauma paradigm. Emerg Med J 23:745-746
12. Holcomb JB, Donathan DP, Cotton BA et al. (2015) Prehospital Transfusion of Plasma and Red Blood Cells in Trauma Patients. Prehosp Emerg Care 19:1-9
13. Holcomb JB, Tilley BC, Baraniuk S et al. (2015) Transfusion of plasma, platelets, and red blood cells in a 1:1:1 vs a 1:1:2 ratio and mortality in patients with severe trauma: the PROPPR randomized clinical trial. JAMA 313:471-482
14. Innerhofer P, Fries D, Mittermayr M et al. (2017) Reversal of trauma-induced coagulopathy using first-line coagulation factor concentrates or fresh frozen plasma (RETIC): a single-centre, parallel-group, open-label, randomised trial. Lancet Haematol
15. Jenkins DH, Rappold JF, Badloe JF et al. (2014) Trauma hemostasis and oxygenation research position paper on remote damage control resuscitation: definitions, current practice, and knowledge gaps. Shock 41 Suppl 1:3-12
16. Klein AA, Arnold P, Bingham RM et al. (2016) AAGBI guidelines: the use of blood components and their alternatives 2016. Anaesthesia 71:829-842
17. Koscielny J, Beyer-Westendorf J, Von Heymann C et al. (2012) [Risk of bleeding and haemorrhagic complication with rivaroxaban--periprocedural management of haemostasis]. Hamostaseologie 32:287-293
18. Koscielny J, Von Tempelhoff GF, Ziemer S et al. (2004) A practical concept for preoperative management of patients with impaired primary hemostasis. Clin Appl Thromb Hemost 10:155-166
19. Kozek-Langenecker SA, Ahmed AB, Afshari A et al. (2017) Management of severe perioperative bleeding: guidelines from the European Society of Anaesthesiology: First update 2016. Eur J Anaesthesiol 34:332-395
20. Lance MD, Ninivaggi M, Schols SE et al. (2012) Perioperative dilutional coagulopathy treated with fresh frozen plasma and fibrinogen concentrate: a prospective randomized intervention trial. Vox Sang 103:25-34
21. Levy JH, Grottke O, Fries D et al. (2017) Therapeutic Plasma Transfusion in Bleeding Patients: A Systematic Review. Anesth Analg 124:1268-1276
22. Lier H, Krep H, Schroeder S et al. (2008) Preconditions of hemostasis in trauma: a review. The influence of acidosis, hypocalcemia, anemia, and hypothermia on functional hemostasis in trauma. J Trauma 65:951-960

23. Lier H, Vorweg M, Hanke A et al. (2013) Thromboelastometry guided therapy of severe bleeding. Essener Runde algorithm. *Hamostaseologie* 33:51-61
24. Meybohm P, Choorapoiyil S, Wessels A et al. (2016) Washed cell salvage in surgical patients: A review and meta-analysis of prospective randomized trials under PRISMA. *Medicine (Baltimore)* 95:e4490
25. Morrison CA, Carrick MM, Norman MA et al. (2011) Hypotensive resuscitation strategy reduces transfusion requirements and severe postoperative coagulopathy in trauma patients with hemorrhagic shock: preliminary results of a randomized controlled trial. *J Trauma* 70:652-663
26. Pierce A, Pittet JF (2014) Practical understanding of hemostasis and approach to the bleeding patient in the OR. *Adv Anesth* 32:1-21
27. Ponschab M, Schochl H, Gabriel C et al. (2015) Haemostatic profile of reconstituted blood in a proposed 1:1:1 ratio of packed red blood cells, platelet concentrate and four different plasma preparations. *Anaesthesia* 70:528-536
28. Rahbar E, Fox EE, Del Junco DJ et al. (2013) Early resuscitation intensity as a surrogate for bleeding severity and early mortality in the PROMMTT study. *J Trauma Acute Care Surg* 75:S16-23
29. Rossaint R, Bouillon B, Cerny V et al. (2016) The European guideline on management of major bleeding and coagulopathy following trauma: fourth edition. *Crit Care* 20:100
30. Savage SA, Zarzaur BL, Croce MA et al. (2013) Redefining massive transfusion when every second counts. *J Trauma Acute Care Surg* 74:396-400; discussion 400-392
31. Schlimp CJ, Ponschab M, Voelckel W et al. (2016) Fibrinogen levels in trauma patients during the first seven days after fibrinogen concentrate therapy: a retrospective study. *Scand J Trauma Resusc Emerg Med* 24:29
32. Schochl H, Voelckel W, Maegele M et al. (2014) Endogenous thrombin potential following hemostatic therapy with 4-factor prothrombin complex concentrate: A 7-day observational study of trauma patients. *Critical Care*:R147
33. Solheim B, Hellstern P (2010) Pathogen Inactivation of Plasma and Cryoprecipitate. In: AuBuchon J, Prowse C (eds) 5. Pathogen Inactivation: The Penultimate Paradigm Shift. AABB Press, Bethesda, MO, p 69-98
34. Spahn DR, Bouillon B, Cerny V et al. (2013) Management of bleeding and coagulopathy following major trauma: an updated European guideline. *Crit Care* 17:R76
35. Spinella PC, Reddy HL, Jaffe JS et al. (2012) Fresh whole blood use for hemorrhagic shock: preserving benefit while avoiding complications. *Anesth Analg* 115:751-758
36. Stein P, Kaserer A, Spahn GH et al. (2017) Point-of-Care Coagulation Monitoring in Trauma Patients. *Semin Thromb Hemost*
37. Stein P, Kaserer A, Sprengel K et al. (2017) Change of transfusion and treatment paradigm in major trauma patients. *Anaesthesia*
38. Tachon G, Harrois A, Tanaka S et al. (2014) Microcirculatory alterations in traumatic hemorrhagic shock. *Crit Care Med* 42:1433-1441
39. Tonglet ML (2016) Early Prediction of Ongoing Hemorrhage in Severe Trauma: Presentation of the Existing Scoring Systems. *Arch Trauma Res* 5:e33377
40. Truhlar A, Deakin CD, Soar J et al. (2015) European Resuscitation Council Guidelines for Resuscitation 2015: Section 4. Cardiac arrest in special circumstances. *Resuscitation* 95:148-201
41. Watson JJ, Pati S, Schreiber MA (2016) Plasma Transfusion: History, Current Realities, and Novel Improvements. *Shock* 46:468-479
42. Wirtz MR, Baumann HM, Klinkspoor JH et al. (2017) Viscoelastic Testing in Trauma. *Semin Thromb Hemost* 43:375-385