

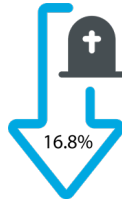


Evidence in focus | Publication summary

Goal-directed hemostatic resuscitation of trauma-induced coagulopathy: A pragmatic randomized clinical trial comparing a viscoelastic assay to conventional coagulation assays

Gonzalez E, et al. *Ann Surg.* (2016)*

Key takeaways



Survival in the TEG® group (80.4%) was higher than the CCA group (63.6%). The CCA group had a statistically significant higher risk of death (hazard ratio = 2.17)



Survival benefit resulted from less early deaths and less hemorrhagic deaths occurring in the TEG group compared with the CCA group

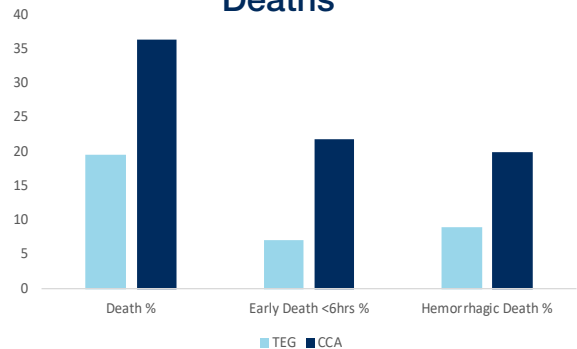
Overview

Massive Transfusion Protocols (MTP) in severely injured patients have become standard of care, yet strategies to guide them vary widely and an optimal approach is not defined. This single center, pragmatic, randomized clinical trial **compared the effect of an MTP goal-directed by TEG to a standard MTP directed by conventional coagulation assays (CCA)**. The level 1 trauma center enrolled 111 injured patients, randomized by weekly alternation of the 2 treatment modalities with outcome analyses including 28-day survival, blood product requirements, mechanical ventilator time, and ICU days.

Results

- TEG guided MTP resulted in a survival benefit at 28 days and at 6 hours, the result of less hemorrhagic deaths and less early deaths, while using less plasma and platelets in the early phase of resuscitation compared with the CCA group.
- Survivors in the TEG-guided MTP group also benefited from more ICU-free and ventilator-free days.
- Similar amounts of crystalloid administration and RBC transfusion suggest similarity in severity of injury and bleeding at baseline, and that the study only influenced care regarding hemostatic blood products and not other aspects of resuscitation.

Deaths



Conclusion

Significantly higher plasma:RBC and platelet:RBC ratio in the CCA group did not improve outcomes or conventional coagulation results. The TEG group demonstrated a significant improvement in survival, while using less plasma and platelets in the early phase of resuscitation but similar rates over 24 hours. The effect of this trial may not be related to the amount of blood product given but to the importance of giving the appropriate treatment at the optimal time.

“This trial demonstrates that a goal-directed, TEG-guided MTP improves survival after injury and promotes appropriate use of hemostatic blood products while favorably impacting ICU stay and mechanical ventilation time.”

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* Gonzalez E., et al. Goal-directed hemostatic resuscitation of trauma-induced coagulopathy: A pragmatic randomized clinical trial comparing a viscoelastic assay to conventional coagulation assays. *Ann Surg.* 2016;263(6):1051-1059. Available at: <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5432433>

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