Assessing Current TEG Practice in Patients with Cirrhosis: A Single Institution Experience

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Introduction

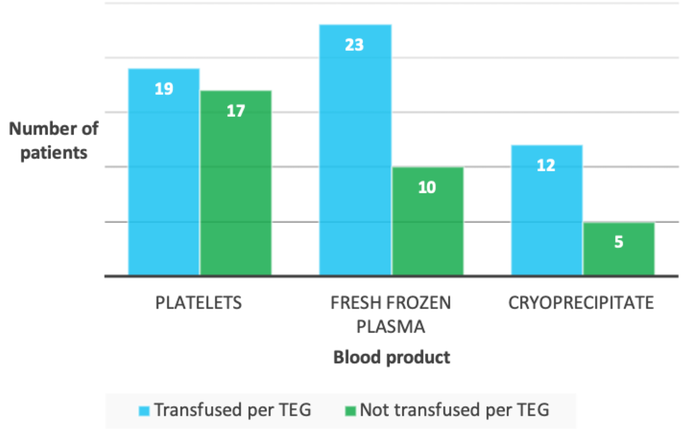
Thromboelastography (TEG) is a blood test used to evaluate hemostasis by measuring platelet function and coagulation efficacy. Patients with cirrhosis can have dysfunctional clotting abilities that are not accurately assessed by standard coagulation testing such as international normalized ratio (INR) and platelet count, and may be subjected to harm from over transfusion. The aim of our study was to evaluate if patients with cirrhosis were appropriately transfused according to TEG parameters prior to inpatient procedures.

Methods

- Retrospective Study
- Population: Patients with cirrhosis who had TEG drawn prior to inpatient procedure
- Data Collection: TEG, lab values for standard coagulation tests, transfused blood products, type of procedure performed, post-procedural outcomes
- Assess appropriateness of transfusion based on TEG parameters verses standard coagulation tests

Results

- Total # patients: 36
- TEG and Platelet count
    - 36 total patients – 19 (52.8%) used TEG-based transfusion strategy
- TEG and INR
    - 33 total patients – 23 (69.7%) transfused per TEG criteria
- TEG and fibrinogen
    - 17 total patients - 12 (70.6%) received TEG-directed transfusion
- 15 patients (41.7%) required post-procedural transfusion
    - 5 (33.3%) transfused in TEG-directed manner



Discussion

- Majority of post-procedural bleeding events occurred in patients not transfused in TEG-based approach prior to procedure
- Clinicians not providing TEG-directed transfusion consistently
- Limited amount of blood product availability
- Excessive transfusions in at-risk population may lead to adverse outcomes

Conclusion

To improve TEG utilization, we propose a system-wide lecture to advance clinician knowledge of TEG as a strategy to minimize transfusions. An automated reminder in the electronic medical record system to facilitate ordering a TEG will be implemented. A follow up study would be conducted to determine if these interventions improved TEG-directed transfusions and to provide a larger cohort to determine the efficacy and safety profile of TEG-directed transfusion.

References

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