



Contents lists available at ScienceDirect

The American Journal of Surgery

journal homepage: www.americanjournalofsurgery.com

Invited Commentary

Bleeding during transplant? Time for a change



Organ transplantation represents one of the major accomplishments of modern medicine over the last 50 years with liver transplantation progressing during that time from experimental therapy to standard of care with excellent outcomes. Advances in anesthesia and critical care during the operative and early postoperative period have played a major role in this success, along with the more obvious improvements in patient selection and immunosuppression. Management of even heavy intraoperative bleeding is now routine for most anesthesia teams and is perhaps only limited by early recognition. This recognition is rarely difficult for the surgical team and thus the missing link is only effective communication. While some surgeons may naturally or intentionally be good or proactive communicators others on the same team might be less so. Is there a role for standardizing such surgeon-anesthesia communication in the name of better control of bleeding and patient care outcome improvement? This is the question Schulick et al. address in this AJS study¹ and the answer seems to be yes.

Rigorously structuring such communication both in terms of standardized “check-in time points” during a case and adopting a pre-existing validated mechanism (the “clinical coagulopathy score”) to communicate degree of bleeding allows for consistent efforts at getting on the same page during a case, and in this study correlated well with TEG demonstrated coagulopathy and concomitant transfusions. More communication done in a clear and objective fashion seems to be always a good thing. Especially in intraoperative scenarios that can be tense or necessarily focused on other matters at hand.

The role of TEG was also examined here and the jury is still out. Intraoperative TEG reporting is attractive as it delineates coagulopathy in a more accurate and sophisticated way than other more routinely reported lab tests and thus allows for more directed treatment. The major disadvantage currently is the timeliness of TEG

data availability, as results are delayed by 30 min or more. In this study, intraoperative TEG measurements did not correlate with transfusions but there is a suggestion that both TEG and surgeon report of coagulopathy score might be combined to help direct anesthesia hemostatic resuscitation.

The path forward in a variety of clinically difficult situations is often improved communication. Efforts at standardizing the way we communicate in the OR to assure it happens in a timely and standardized fashion are worthy of imitation. Correlating such subjective impressions with state of the art objective measurements of coagulopathy seems like the right path forward. Objectively measuring and reporting the results of such attempts will help the rest of us get on board.

Declaration of competing interest

No conflicts of interest to declare.

Reference

1. Schulick AC, Moore HB, Walker CB, et al. A clinical coagulopathy score concurrent with viscoelastic testing defines opportunities to improve hemostatic resuscitation and enhance blood product utilization during liver transplantation. *Am J Surg.* 2020;6:1379–1386.

Andrew M. Cameron
 Department of Surgery, The Johns Hopkins School of Medicine, Ross
 765, Baltimore, MD, 21205, USA
 E-mail address: acamero5@jhmi.edu.

20 September 2020