Tranexamic acid for cesarean delivery: evidence of fibrinolysis?

We read the letter “Tranexamic acid for cesarean delivery: induction of a regimen for postpartum hemorrhage?” in response to our publication “Tranexamic acid administered during cesarean delivery in high-risk patients: maternal pharmacokinetics, pharmacodynamics, and coagulation status.” We agree that using systemic whole blood to detect postpartum hyperfibrinolysis with rotational thromboelastography (ROTEM; Instrumentation Laboratory, Bedford, MA) may have limitations. Consistent with this, we saw no evidence of hyperfibrinolysis in peripheral samples by comparing EXTEM (ROTEM without aprotinin) vs APTEM (ROTEM with aprotinin) clotting time and maximum clot firmness (MCF). Lack of peripheral hyperfibrinolysis may indicate an absence of hyperfibrinolysis or early localized hyperfibrinolysis sequestered within the uterus. Despite these limitations, ROTEM has previously identified profound hyperfibrinolysis and can demonstrate coagulopathy during severe postpartum hemorrhage (PPH).¹

The authors inquire whether our FIBTEM (ROTEM for assessing fibrinogen levels and fibrin polymerization) with platelet inhibitor cytochalasin D, but the results were not reported. Second, even if higher ML values were present, it is important to consider the possibility of platelet-mediated clot retraction. Arnolds and Scavone previously observed increased clot lysis (≥3%) at 30 minutes on kaolin-activated thromboelastography in 12.7% (15 of 118) PPH cases.³ However, a simultaneously performed functional fibrinogen test using abciximab failed to demonstrate any clot lysis in 13 of the 15 cases (86.7%). Clot retraction is driven by platelets, and thus, a platelet inhibitor allows differentiation from clot lysis. Seifert et al also performed an assay (FIBTEM [ROTEM for assessing fibrinogen levels and fibrin polymerization]) with platelet inhibitor cytochalasin D, but the results were not reported. Third, the authors’ comment that “TXA concentration was associated with enhanced clot strength” was based on a weak positive correlation between TXA concentration and EXTEM-MCF (r=0.32). For cases with substantial bleeding, it is plausible that the accompanying hemodilution lowered both TXA and MCF and caused this correlation.

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Hemostasis in placenta accreta spectrum: is internal manual aortic compression enough?

TO THE EDITORS: We appreciate the recent recognition that the internal manual aortic compression (IMAC) technique received as an emergency hemostatic maneuver in placenta accreta spectrum (PAS) procedures owing to the work of Nieto-Calvache et al.1

However, IMAC remains a temporary intraoperative measure, intended to limit blood loss, until more definitive hemostatic measures are in place. Resource–constrained centers that often encounter PAS unexpectedly, cannot deploy expensive techniques such as Resuscitative Endovascular Balloon Occlusion of the Aorta (REBOA) or cell-salvage systems. The shortage of vascular surgeons limits the prospects for a retroperitoneal dissection needed for aortic cross-clamping.2

During IMAC, the low transverse abdominal incision typically used in obstetric laparotomies may not allow adequate access for the surgeon’s hand to reach cranial to the aortic bifurcation. In addition, IMAC needs a dedicated operator to apply significant and sustained pressure over a large segment of the thick-walled abdominal aorta until definitive measures are in place, which is likely to become increasingly ineffective as the operator tires out. Furthermore, during IMAC, bladder or pelvic dissection will be tedious, as the uterus is pushed caudally, and accessing the placental or bladder area will be difficult.

We propose a simple solution: a purpose-designed clamp that occludes the aorta without retroperitoneal dissection. The Paily Aorta Clamp (PAC) can be easily applied just above the aortic bifurcation (or on the common iliac arteries if needed) when unexpected uterine and/or parametrial hemorrhage is noted intraoperatively (Figure). Then, the PAC can be left clamped in situ to provide a bloodless operative field for bladder or pelvic dissection, just as in elective procedures. Video demonstration of the clamp application can be found in the study by Paily et al.3 PAC effectively limits the massive blood loss associated with PAS procedures in a way similar to

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