Obstetric hemorrhage remains the leading cause of maternal death in the world, with both high morbidity and mortality. Tranexamic acid (TXA), or trans-4-(aminomethyl)cyclohexanecarboxylic acid, is an antifibrinolytic agent approved for the treatment and prevention of hemorrhage with a goal of decreasing blood loss and reducing the need for blood product therapy. From an obstetric standpoint, TXA is known to fully cross the placental barrier, however, the fetal effects of TXA are still unknown. FDA warnings for TXA include retinal degeneration, seizures and thrombosis, which raises special obstetric concern for the fetus, preeclamptic parturients and the relatively hypercoagulable state of pregnancy in general. In the literature, there are not many reports of TXA use as a tool to minimize or prevent obstetric postpartum hemorrhage. In this case report, we present a successful use of TXA in a multiparous patient with known history of uterine rupture and T uterine incision, minimizing blood loss and coagulopathy.

Our patient was a 39 year old multigravida at 36 weeks and 6 days gestation for elective repeat cesarean section and tubal ligation. The patient had a history of advanced maternal age, iron deficiency anemia (starting hematocrit 33.4%), multiple myomectomies and a primary cesarean section complicated by postpartum hemorrhage and a T-shape incision under general anesthesia two years prior to this presentation. The anesthetic management included planning for perioperative use of tranexamic acid, a type and cross for four units of packed red blood cells, and two large bore peripheral intravenous catheters. Under spinal anesthesia, skin incision immediately revealed placental adhesion to the abdominal wall and uterine rupture. We administered 1 gram of TXA after delivery of the baby and experienced significantly less blood loss than usually seen in uterine rupture at our facility. The patient remained hemodynamically stable throughout the procedure and the need for general anesthesia was avoided. The obstetric team was able to preserve the uterus and the patient required no further resuscitation postoperatively. She was discharged to home on postoperative day 3.

There are few published randomized controlled trials within the past few years that support the use of TXA in postpartum hemorrhage. The WOMAN trial published this year revealed a substantially lower risk of death secondary to postpartum hemorrhage in the TXA group. However, the majority of literature on TXA revolves around its use in the general operating rooms for elective surgeries and traumas. The CRASH-2 trial demonstrated decreased mortality secondary to hemorrhage in addition to no increase in thromboembolic events in trauma patients, but no large randomized controlled trials of this caliber exist within obstetric anesthesia. It is clear that more research is needed on tranexamic acid use in the obstetric arena, along with its long term effects on the neonate and recommended dosing in the obstetric patient.