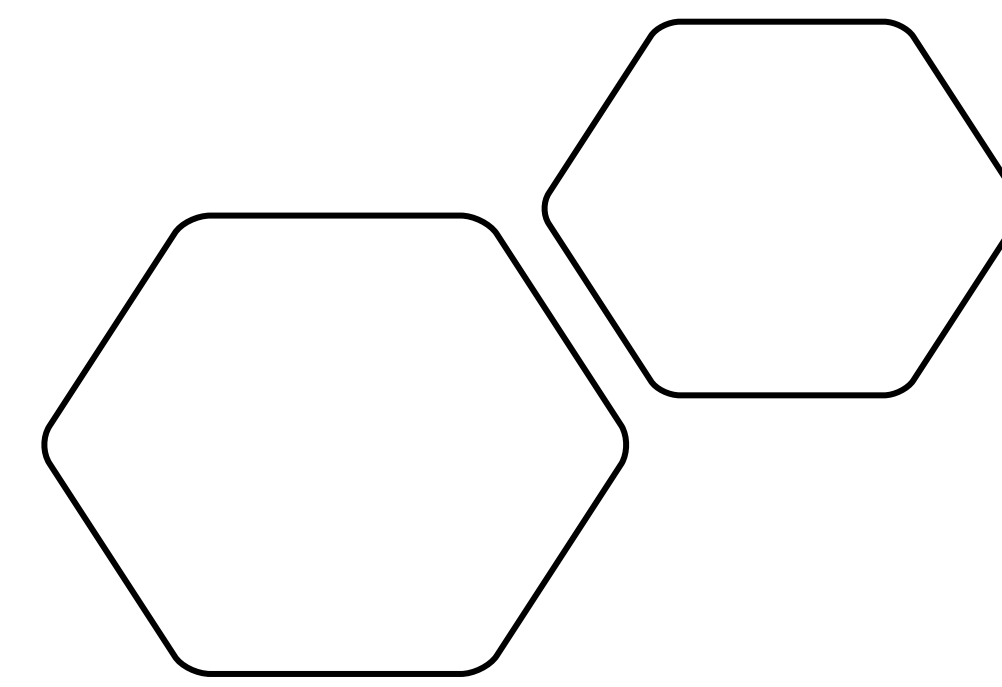




Post Partum Transfusion-Related Acute Lung Injury and atypical Hemolytic Uremic Syndrome

Omar El Masri MD, Colleen Martel MD, Adrienne Ray MD

Department of Anesthesiology. Ochsner Clinic Foundation, New Orleans, Louisiana



Case Presentation

- 37 y.o. G2P1001 woman at 39w6d presented for a scheduled cesarean delivery (CD). PMHx was significant for failed IOL due to fetal intolerance, PPH, advanced maternal age, endometriosis, & fibroids.
- CD complicated by 1.5L EBL for which she received 1unit of pRBC intra-op.
- In recovery, she had recurrent hemorrhage and sustained 750 ml blood loss. While receiving a second unit of pRBC, she became hypoxic, desaturating to 70% and hypotensive at 90/60. Transfusion was stopped. She was intubated, started on pressor support.
- CXR showed bilateral diffuse pulmonary edema. POCUS exam showed B lines and no signs of cardiac strain.
- Transferred to the ICU.
- TRALI was the clinical diagnosis and was later confirmed by serologic testing.
- Patient remained in ICU for 7 days and her course was complicated by resultant lactic acidosis, transaminitis, AKI and hyperkalemia- requiring CRRT. Subsequently, her anemia worsened, and she developed thrombocytopenia, consistent with aHUS. She was given 2u pRBCs and treated with eculizumab. Her anemia and thrombocytopenia improved, and her kidney function returned to baseline.
- Respiratory failure resolved, and she was extubated on POD 4. Discharged home on day 9 with Heme/Onc, ID, and OB outpatient follow up.
- Labs showed ADAM TS13-18%, low values commonly seen in aHUS & acquired TTP, normal coagulation studies, and her complement genetic markers were negative.
- TRALI workup revealed a donor anti-HLA antibody to an antigen our patient's serum.

Discussion

- TRALI has an incidence of 1 per 5 000-10 000.
- aHUS occurs in 1 out of every 25,000 pregnancies, mostly postpartum, and it is associated with poor maternal outcomes.
- It is known that postpartum bleeding, chorioamniotic infections, and the passage of fetal cells into the maternal circulation with induction of anti-HLA antibodies (particularly in a subsequent pregnancy) can activate alternative complement pathway and trigger HUS in congenitally predisposed patients.
- Concomitant incidence of TRALI and aHUS is not well understood. Complement dysregulation is implicated in both disease states.
- A question this case raises is what link exists between both conditions, if any.