

# No Platelets, No Problem: Management of Cesarean Delivery in a Patient with Refractory ITP & Pre-Eclampsia with Severe Features

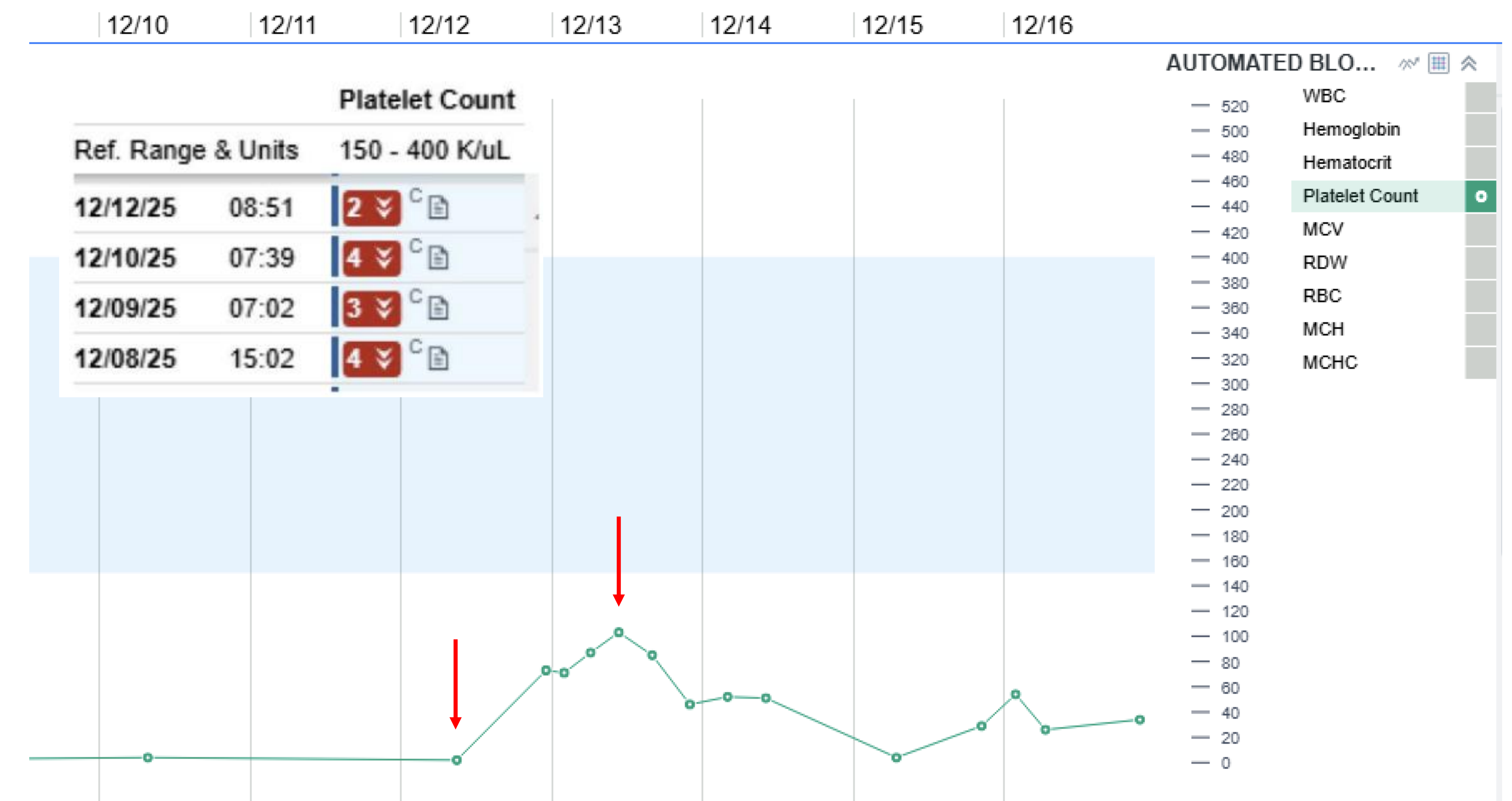
Rachel Pedreira, MD, MS   Fatine Karkri, MD   Kimberly Mendoza, MD, PhD, MPH   Brendan Carvalho, MD

## INTRODUCTION:

- Immune Thrombocytopenic Purpura (ITP) → autoimmune platelet destruction and impaired platelet production
- Refractory thrombocytopenia complicates labor and delivery
  - Neuraxial analgesia, PPH risk

## CASE BACKGROUND:

- 36-year-old G2P0010 patient
- IVF pregnancy
- Hx of childhood aplastic anemia → severe ITP
- Tx during pregnancy ineffective
  - IVIG, prednisone, AZA, and 2<sup>nd</sup> trimester splenectomy
- Sx = bruising and bleeding gums, no other bleeding
- Admitted with pre-eclampsia at 34+3 weeks
- At admission and through delivery, platelet count remained very low despite ongoing platelet transfusion



**Platelet Count:** nadir at 2 prior to delivery, peak at 113 PPD1

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## PATIENT MANAGEMENT:

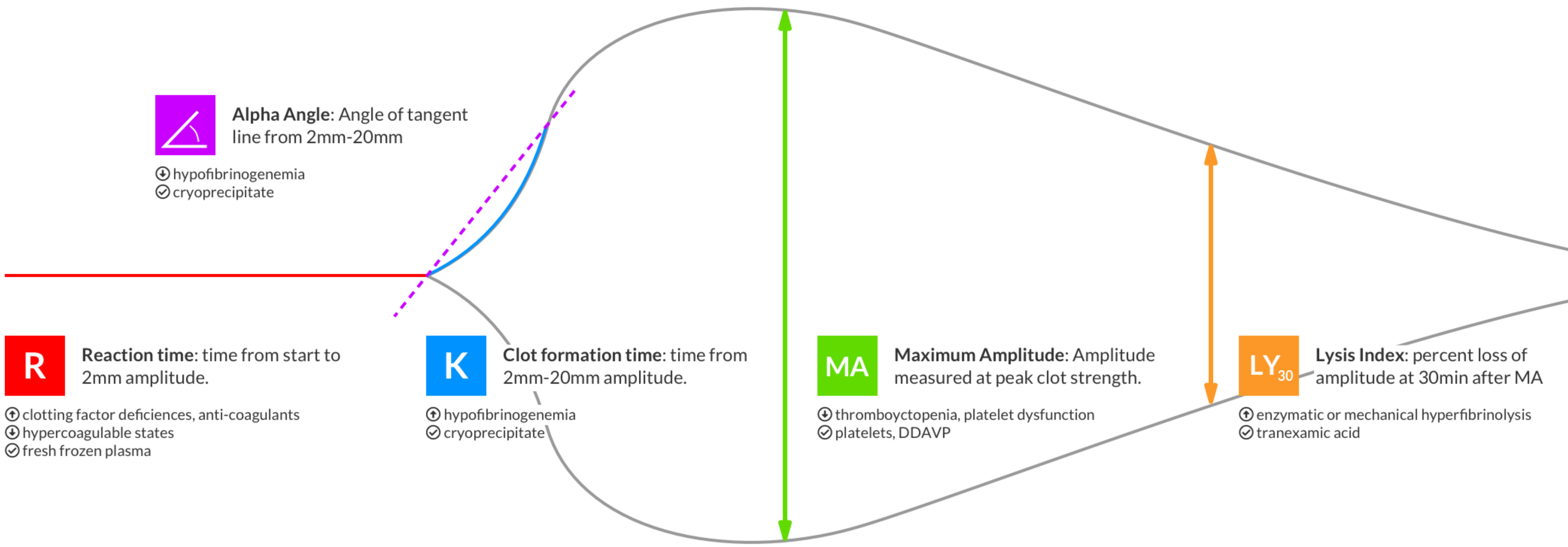
- Initial plan: IOL + remifentanil PCA for analgesia
- Due to evolving Pre-E w/ SF (BP 180s/100s), concern for:
  - Hemorrhagic stroke
  - Hemorrhage w/ intrapartum CS or prolonged labor
  - NICU concern for fetal thrombocytopenia/bleeding
- Final decision: primary CS w/ GA at 35 weeks

## INTRA-OPERATIVE and POST-OPERATIVE COURSE:

- Pre-op platelets 3,000/ $\mu$ L and TEG with MA slightly reduced
- A platelet transfusion pre-incision, TXA given after delivery
- Hemodynamically stable induction & atraumatic intubation
- Total QBL 437ml, 3 units platelets given intraoperatively
- MICU admission post-operatively in stable condition
- No bleeding complications
- Patient discharged 6 days post-operatively

### TEG (immediately pre-op)

| Related Results                                   | Ref Range & Units   |       | ⌵ |
|---------------------------------------------------|---------------------|-------|---|
| R, Reaction Time (CK)                             | 4.6 - 9.1 min       | 7.2   |   |
| K, Clot Kinetics (CK)                             | 0.8 - 2.1 min       | 2.0   |   |
| Angle, Speed of Clot Strengthening (CK)           | 63.0 - 78.0 deg     | 63.5  |   |
| MA, Maximum Clot Strength (CK)                    | 52.0 - 69.0 mm      | 42.5  | ⬇ |
| MA, Maximum Clot Strength (CRT)                   | 52.0 - 70.0 mm      | 42.4  | ⬇ |
| R, Reaction Time (CK/H)                           | 4.3 - 8.3 min       | 6.8   |   |
| MA, Maximum Clot Strength (CFF)                   | 15.0 - 32.0 mm      | 32.3  | ⬆ |
| FLEV, Estimated Functional Fibrinogen Level (CFF) | 278.0 - 581.0 mg/dl | 589.4 | ⬆ |

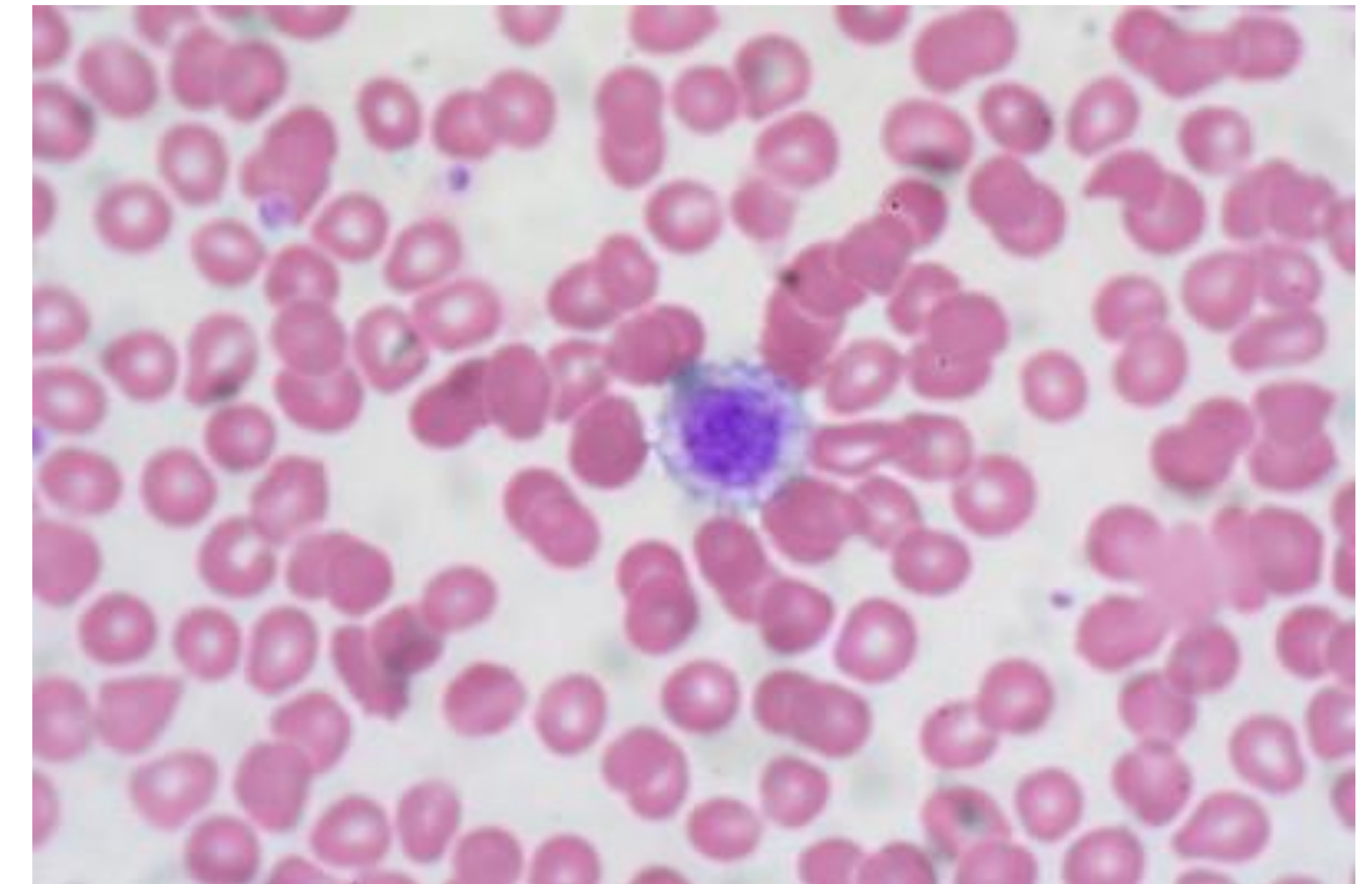


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## CONCLUSIONS and TEACHING POINTS:

- Longstanding refractory ITP is challenging in the intrapartum period
  - Target platelet count > 50,000 at/near CS delivery
  - Target > 30,000 to prevent significant bleeding
- Superimposed Pre-E creates additional challenges
- Despite thrombocytopenia, platelet transfusion and TXA prophylaxis → minimal QBL
- Possible placental sequestration of platelets?
- Overall positive delivery experience, patient and infant discharged in stable condition
- This case demonstrates the importance of agile multidisciplinary teamwork in setting of dynamically changing patient conditions



## REFERENCES:

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