# Management of PPH in a Patient with ITP and Superimposed HELLP

Sherry Liou, MD; Won Lee, MD; Peter Yeh, MD; Stephanie Lim, MD

- **Case**
  - 33 y.o. G2P1 at 36w4d
  - PLT of 54 on first trimester labs
  - Prior obstetric history notable for a CD 13 years ago
  - Transferred for management of ongoing thrombocytopenia (PLT of 9)
  - Labs on admission:
    - Reticulocyte count 9.44%

| | |
|---|---|
| Hgb | 7.4 |
| PLT | 16 |
| Fibrinogen | 271 |
| LDH | 579 |

| | |
|---|---|
| AST | 42 |
| ALT | 39 |
| ALP | 216 |

# Management of PPH in a Patient with ITP and superimposed HELLP

- **Management**
  - IVIG, steroids, magnesium
  - Urgent delivery by cesarean section
    - Complicated by PPH requiring return to OR for ex-lap and B-lynch sutures
    - Total blood loss of ~5L
  - Total transfusion: 8U PRBC, 6U FFP, 5U PLT, 25U cryoprecipitate
    - 2U PLT prior to C-section
  - Uterotonics given: 75U oxytocin,1g TXA, 800mcg misoprostol, and 500mcg carboprost

# Management of PPH in a Patient with ITP and superimposed HELLP

## Discussion

- Microvascular thrombotic process
  - **HELLP**
    - Third trimester
    - RUQ pain, HTN
    - Tx: delivery
  - **TTP**
    - Can occur any time during pregnancy
    - Neuro symptoms common
    - Tx: supportive therapy, plasma exchange

- Immune-mediated destruction of platelets
  - **ITP**
    - Isolated thrombocytopenia
    - Higher percentage of immature platelets on smear
    - Tx: corticosteroids +/- IVIG

| Causative diagnosis | Mechanism | Diagnostic features |
|---|---|---|
| Gestational thrombocytopenia | Physiological dilution, accelerated destruction | Third trimester, platelets >70 × $10^9$/l; incidental finding |
| Immune thrombocytopenic purpura | Immune destruction, suppressed production | Diagnosis of exclusion |
| Thrombotic thrombocytopenic purpura, haemolytic uraemic syndrome | Peripheral consumption, microthrombi | Unwell, fever, neurological and renal dysfunction |
| Haemolysis, elevated liver enzymes and low platelet count syndrome (HELLP syndrome) | Peripheral consumption, microthrombi | Raised LDH, ALT and bilirubin, haemolytic anaemia +/− pre-eclampsia, DIC |

Myers B. Thrombocytopenia in pregnancy. **The Obstetrician & Gynaecologist** 2009;11:177–183.