Thrombocytopenia In Pregnancy

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Normal Pregnancy

- 150,000 – 450,000
- Remains stable throughout pregnancy
- Slight decrease in some patients
- Remains within normal limits

Thrombocytopenia

- 6-12% of pregnancies in third trimester
- Second most common hematologic disorder in pregnancy
- Important to determine the etiology to optimize clinical outcome
- Maternal and neonatal implications

Gestational	AutoImmune	Systemic	Infection	Drugs
	Primary (ITP)	HELLP	HCV	Antimicrobials
Pseudo-thmbocytopenia	Secondary	TTP/HUS	HIV	Anti-epileptic
	APS	DIC	CMV	Analgesics
	SLE		EBV	HIT (Heparin)

Drug Induced Thrombocytopenia

Reese et al. Blood. 2010 Sep 23

Abciximab
Acetaminophen
Amiodarone
Ampicillin
Carbamazepine
Eptifibatide
Ethambutol
Haloperidol
Ibuprofen
Naproxen
Oxaliplatin
Phenytoin
Piperacillin
Quinidine
Quinine
Ranitidine
Rifampin
Simvastatin
Sulfisoxazole
Trimethoprim-sulfamethoxazole
Valproic acid
Vancomycin

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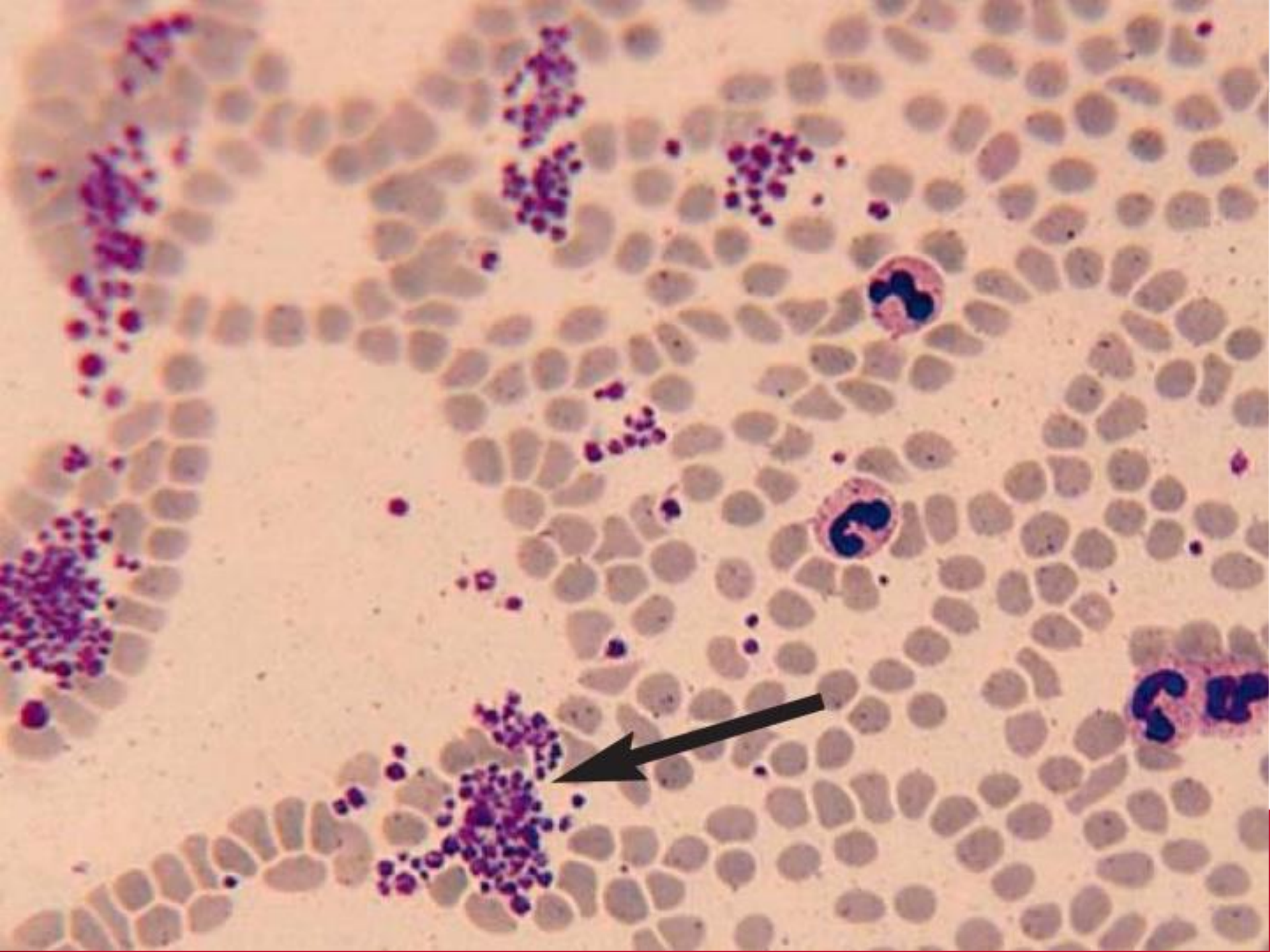
Evaluation

- Detailed history
  - Medical, family, medication
- Clinical Scenario
  - Gestational age, viral illness, HTN
- Peripheral smear
  - Rule out pseudo-thrombocytopenia



Gestational Thrombocytopenia

- 10% of pregnancies
- 80% of all cases of thrombocytopenia
- Mild thrombocytopenia (> 70,000)
- No history of thrombocytopenia / bleeding
- Later in gestation
- Not associated with fetal thrombocytopenia
- Resolves spontaneously post partum

Immune Thrombocytopenia (ITP)

- 1:1,000 pregnancies
- 1-4% cases of thrombocytopenia
- Thrombocytopenia more profound
- Often have a bleeding history
- Persists post partum
- May cause neonatal thrombocytopenia and hemorrhage

Gestational vs ITP?

- Distinction between mild ITP and gestational thrombocytopenia may NOT be possible.
- No laboratory tests to differentiate
- Both demonstrate anti-platelet antibodies
- Immunologic etiology
- Clinical overlap

Gestational vs ITP

- ITP may have implications for neonate
- Anti-platelet IgG antibodies cross placenta
  - Risk for neonatal thrombocytopenia:
    - Plts < 50,000: 10-15%
    - Platelets < 20,000: 5%
  - Risk for intracranial hemorrhage <1.5%

Clinical Case

25 year old G2P1001 with scant prenatal care, found to have a platelet count of 75,,000 at 30 weeks gestation. Her first pregnancy was uncomplicated, but remembers her platelets were “low.” Never had post partum follow up. No history of bleeding. Negative family history. Repeat platelet count at 32 weeks: 60,000.

Evaluation

- History unremarkable
- Peripheral smear normal
- +/- viral titers (normal)
- ITP or gestational?

Pregnancy Management

- Monitor platelet counts
- ? Frequency
  - Q trimester
  - Q weekly
- Neither GT nor ITP is an indication for c/s
- Fetal umbilical cord sampling not indicated
- If patient is asymptomatic: goal is to prepare for delivery.

Risk of Maternal Bleeding

- Minimal if platelets > 50,000 (c/s)
- Minimal if platelets > 30,000 (vaginal)
- Regional anesthesia
- Always consider need for c/s

Treatment	Initial Onset (days)	Peak Onset (days)
Prednisone	4-14	7-28
Dexamethasone	2-14	4-28
IVIG	1-3	2-7
Platelet Tx	immediate	

Treatment

- Prednisone (1mg/kd/day)
  - Slow taper to maintain platelet count
- Prednisone 10-20 mg QD starting 10 days prior to delivery
- Dexamethasone 40 mg/day x 4 days
  - Wei et al. Blood March 25, 2016

Delivery

- C/S not indicated for GT or ITP
  - Vacuum / forceps relative contraindication
  - Forceps lower risk of cephalohematoma
- Neuroaxial analgesia
- Precise platelet count not known
  - >80,000
  - Varies by institution
  - Be familiar with local guidelines !

Post partum

- Alert pediatricians
  - Neonatal platelet count may continue to drop post partum
- Unclear diagnosis?
  - Repeat maternal platelet count 2-3 months post partum
  - Recurrence risk unknown

Summary

- Thombocytopenia 10% of pregnancies
- Majority of cases etiology is evident
- Don’t overlook:
  - Pseudo thrombocytopenia, drug induced induced, viral
- Distinguish between mild ITP and GT may not be necessary

Summary

- Risk of maternal hemorrhage is low
- Risk of neonatal ICH is low
- Preparation for delivery
  - Steroids
  - IVIG
  - Platelet transfusion (if actively bleeding)
- **POST PARTUM FOLLOW UP**