

THROMBOCYTOPENIA IN PREGNANCY

1. OPTIMAL OUTCOMES

- Appropriate assessment and management of thrombocytopenia to prevent fetal and maternal morbidity and mortality

2. PATIENT

- Pregnant woman with Platelet < 150 x 10⁹/L

3. STAFF

- Medical staff
- Registered midwives

4. EQUIPMENT

- 21 gauge needle with vacutainer
- EDTA blood tube (FBC) – Purple top
- Lithium heparin with gel separation blood tube (UEC, LFT, Uric Acid) – Green top

5. CLINICAL PRACTICE

- Review full blood count (FBC) at booking visit and at 28 weeks
- Determine bleeding history, co-morbidities, platelet count pre-natally and in previous pregnancies
- Investigate thrombocytopenia:
 - Review blood film - fragmentation, platelet size
 - Blood Pressure, Urinalysis, Protein : Creatinine ratio, Electrolytes, Urea, Creatinine (UEC), Liver Function Test, uric acid to exclude pre-eclampsia or related syndrome
- Assess risk of bleeding
- Refer woman with moderate to severe thrombocytopenia (Platelet <100 x 10⁹/L), known history of Idiopathic Thrombocytopenic Purpura (ITP) or previous severe thrombocytopenia in pregnancy to obstetrician, physician or haematologist
- Monitored FBC regularly
- Arrange antenatal anaesthetic consult if platelet count <100
- Check FBC on admission in labour

6. HAZARDS / SUB-OPTIMAL OUTCOMES

- Maternal haemorrhage (ante-partum, associated with regional anaesthesia)
- Post Partum Haemorrhage with requirement for blood transfusion
- Fetal haemorrhage

7. DOCUMENTATION

- Antenatal hospital record and yellow card
- Integrated notes
- ObstetriX

ROYAL HOSPITAL FOR WOMEN

LOCAL OPERATING PROCEDURES

Approved by

Quality & Patient Safety Committee

CLINICAL POLICIES, PROCEDURES & GUIDELINES MANUAL 17/6/10**THROMBOCYTOPENIA IN PREGNANCY cont'd****8. EDUCATIONAL NOTES**

- Physiological thrombocytopenia occurs in normal pregnancy, with an average decrease in platelet count of 10%, occurring mostly in the 3rd trimester. It is due to haemodilution or accelerated platelet destruction and normalises 24 -72 hours post-partum.
- Up to 10% of pregnancies have a complicated thrombocytopenia, characterised as
 - Mild 100-150 x 10⁹/L
 - Moderate 50-100 x 10⁹/L
 - Severe < 50 x 10⁹/L
- Causes of thrombocytopenia in pregnancy :

Pregnancy-specific	Non-pregnancy-specific
Increased destruction :	Increased destruction :
Gestational	Idiopathic Thrombocytopenic Purpura (ITP)
Pre-eclampsia	TTP, HUS, Disseminated Intravascular Coagulation(DIC)
	Including but not limited to Microangiopathies
Acute Fatty Liver of Pregnancy	Drug-induced
Disseminated intravascular coagulopathy	Viral infections
	Hypersplenism
	Decreased production :
	Bone Marrow Disease
	Nutritional deficiency
	Liver disease
	Congenital thrombocytopenia

- Gestational and ITP are the most common causes of thrombocytopenia in pregnancy.
- **Gestational thrombocytopenia :**
 - Occurs in 5-9% of pregnancies
 - Accounts for 75% of pregnancy-associated thrombocytopenia
 - Asymptomatic, platelet count usually > 70 x 10⁹/L, normalises post-partum
 - Is NOT associated with increased maternal haemorrhage nor fetal thrombocytopenia
- **ITP**
 - Rare
 - Associated with risk of maternal and fetal haemorrhage
 - Thrombocytopenia at any gestation, and may be < 50 x 10⁹/L
 - Requires multi-disciplinary management, including obstetrician, anaesthetist and haematologist / physician.

9. RELATED POLICIES / PROCEDURES / GUIDELINES

- Antenatal Shared Care Protocol
- Pre-eclampsia – Intrapartum Care of Women
- ACMI guidelines for Referral

10. REFERENCES

- 1 Kam PCA, Thompson SA, Liew ACS. Thrombocytopenia in the parturient. *Anaesthesia*, 2004; **59**: 255-264.
- 2 McCrae K. Thrombocytopenia in pregnancy: differential diagnosis, pathogenesis, and management. *Blood Reviews*, 2003; **17**:7-14.
- 3 Sukentk-Halevy R, Ellis M, Fejgin M. Management of Immune Thrombocytopenic Purpura in Pregnancy. *Obstetrical and Gynecological Survey*, 2008; **63** (3):182-188