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 10^9/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:
     o Review blood film - fragmentation, platelet size
     o 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 10^9/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
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 10^9/L
  - Moderate  50-100 x 10^9/L
  - Severe  < 50 x 10^9/L

- Causes of thrombocytopenia in pregnancy:

<table>
<thead>
<tr>
<th>Pregnancy-specific</th>
<th>Non-pregnancy-specific</th>
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<tbody>
<tr>
<td><strong>Increased destruction</strong>:</td>
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<tr>
<td>Gestational</td>
<td>Idiopathic Thrombocytopenic Purpura (ITP)</td>
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<td>Pre-eclampsia</td>
<td>TTP, HUS, Disseminated Intravascular Coagulation (DIC)</td>
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<td>Acute Fatty Liver of Pregnancy</td>
<td>Drug-induced</td>
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<td>Disseminated intravascular coagulopathy</td>
<td>Viral infections</td>
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<td><strong>Decreased production</strong>:</td>
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<td>Bone Marrow Disease</td>
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<td>Nutritional deficiency</td>
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<td>Liver disease</td>
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<td>Congenital thrombocytopenia</td>
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- 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 10^9/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 10^9/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 Referal

10. REFERENCES