Thrombocytopenia (Low Platelets)

Red Flags

- If significant bleeding and acute admission may be necessary, phone the on-call haematologist.
- Arrange urgent assessment if severe thrombocytopenia (< 10 x 10^5/L), as this is associated with an increased risk of bleeding.

About thrombocytopenia

A low platelet count (< 150 x 10^9/L) is extremely common in clinical practice.

Causes include:

1. Spurious e.g., EDTA induced clumping, clotted sample.
2. Physiological e.g., pregnancy.
3. Reduced production e.g., post viral, congenital, drugs, alcohol, B12 / folate, myelodysplastic syndrome (MDS).
4. Increased destruction e.g., drugs, idiopathic thrombocytopenic purpura (ITP), auto-immune, disseminated intravascular coagulation (DIC).

Assessment

1. History:
   - Bleeding symptoms - usually only when platelets are < 10 x 10^9/L.
   - Drugs e.g., aspirin, quinine, NSAIDs. Also consider over-the-counter drugs, herbal medications, and supplements.
   - Recent viral illness, night sweats, weight loss, arthralgia and rashes.
   - Family history of bruising or bleeding, or low platelets.
   - Nutritional and alcohol history.

2. Examination:
   - Fundoscopy - CNS bleeding is the most common cause of death in severe thrombocytopenia.
   - Lympadenopathy and/or hepatosplenomegaly may suggest underlying systemic disease.
   - Skin for sites of bleeding.

3. Assess the risk of bleeding according to the platelet count.
   - If the platelet count is:
     - 50 to 150, no risk of bleeding.
• 30 to 50, rarely causes bleeding even with trauma.
• 10 to 30, may cause bleeding with trauma but is unusual with normal day
to day activity. Many patients are asymptomatic.
• < 10, may have spontaneous bruising or bleeding. Many are still
asymptomatic.

Note: Bleeding risk is also dependent on whether other parts of the haemostatic process
are involved e.g., coagulation factor abnormalities in liver disease.

Management
Initially, if:
• Platelet count > 80 and asymptomatic, repeat CBC and blood film to confirm
  within the next week.
• Platelet count < 80 or symptomatic, repeat CBC, blood film, and coagulation
  screen the next day.

Low platelet count confirmed, according to clinical suspicion, consider:
• Coagulation screen
• Liver function including GGT
• Serum B12 and folate
• HIV serology (low platelet may be the only feature in early disease)
• Anti-nuclear factor (ITP may be secondary to SLE)

On retesting, if platelet count is:
1. Normal, repeat testing in one month.
2. < 80 or symptomatic, request haematologist assessment. As bleeding is unlikely
to be solely due to thrombocytopenia at a platelet count > 30, consider whether
another cause of bleeding is more likely e.g., GI pathology, vasculitis.
3. 80 and asymptomatic:
   • Stop any drugs started in the last 3 months.
   • Treat any deficiencies and follow up other abnormalities.
   • If the patient is < 50 years, immune thrombocytopenia (ITP) is the most
     likely diagnosis.
     
     **ITP likely diagnosis:**
     o Treatment is not necessary.
     o Monitor CBC monthly for 2 months and then yearly if stable.
     o Advise patient to report any petechial rash, bruising, or bleeding.
   • If the patient is > 50 years, and other blood tests are normal,
     myelodysplastic syndrome is the likely diagnosis.
     
     **MDS likely diagnosis:**
- Treatment not required.
- Monitor CBC monthly for 2 months and 4 monthly if stable.
- Advise patient to report any petechial rash, bruising or bleeding.

**Request**

- Phone the on-call haematologist if the patient has significant bleeding and may need acute admission.
- Request haematologist assessment if platelet count < 80 or the patient is symptomatic.
- Where appropriate written advice may be available.