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 10^6/L), as this is associated with an increased risk of bleeding.

About thrombocytopenia

A low platelet count (< 150 x 109/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 109/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 thromobcytopenia.
    - 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:

        - Treatment is not necessary.
        - Monitor CBC monthly for 2 months and then yearly if stable.
        - 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.