

19. THROMBOCYTOSIS (HIGH PLATELETS)

19.1 SCOPE

Thrombocytosis is defined as a platelet count $>450 \times 10^9/L$ and is a common incidental finding.

There are broadly two types of thrombocytosis:

Primary haematological disease:

- Essential thrombocythemia
 - Other myeloproliferative disorder (e.g. polycythaemia rubra vera, myelofibrosis, chronic myeloid leukaemia)
 - Can be asymptomatic but supporting features include splenomegaly, thrombosis, bleeding, polycythaemia (+/- hypochromic indices suggesting iron deficiency), and neutrophilia.

Secondary or reactive (often, but not always, associated with an elevated CRP):

- Infection
- Inflammation
- Bleeding
- Iron deficiency
- Tissue damage (e.g. recent trauma or surgery)
- Malignancy (and rebound after chemotherapy)
- Hyposplenism (e.g. splenectomy, coeliac disease)
- Tissue damage (e.g. recent trauma or surgery)
- Severe prolonged exercise
- Any other causes of an acute phase response

19.2 ASSESSMENT

- History and examination to identify potential secondary causes
- History of thrombosis or bleeding
- Examine for splenomegaly

19.3 INVESTIGATIONS

- FBC and blood film
- CRP
- Ferritin
- Urate and LDH

19.4 MANAGEMENT AND REFERRAL

Secondary thrombocytosis requires management of the underlying disorder. Correct and investigate iron deficiency.

Beware of giving iron therapy in iron deficient polycythaemia (risk of acute Hb rise and thrombosis).

19.4.1 Urgent Referral

In absence of raised inflammatory markers and no obvious secondary cause:

- Platelets $>1000 \times 10^9/l$
- Platelets $600-1000 \times 10^9/l$ in association with recent thrombosis or abnormal bleeding

If not meeting urgent referral criteria:

- Repeat FBC in 4-6 weeks
 - If persistent thrombocytosis (in absence of raised inflammatory markers and no obvious secondary cause), request JAK2 mutation.
 - NB. Other gene mutations will be reflex tested if JAK2 negative. Haematology can help with interpretation when full results are through.

19.4.2 Routine Referral

- Platelets $>600 \times 10^9/l$ on at least two occasions, 4-6 weeks apart with normal inflammatory markers and no obvious secondary cause
- Platelets $>450 \times 10^9/l$ on at least two occasions, 4-6 weeks apart with normal inflammatory markers and no obvious secondary cause PLUS one of the following:
 - i.previous history of thrombosis (within 2 years)
 - ii.splenomegaly
 - iii.polycythaemia or neutrophilia
 - iv.positive molecular test (e.g. JAK2, CALR, MPL)

19.4.3 Seek Advice & Guidance

- Platelets 450-600 with normal inflammatory markers, no obvious secondary cause, and negative molecular test results