HAEMATOLOGY GUIDANCE SHEET
H.A003 - ISOLATED THROMBOCYTOPENIA (WCC AND RED CELLS NORMAL) IN ADULT PATIENTS

What is isolated thrombocytopenia?

Isolated thrombocytopenia is a relatively common finding on routine FBCs. The platelet count is usually >20 x 10^9/L and the patient is usually asymptomatic. A review of previous blood counts often shows persistent thrombocytopenia. Symptomatic acute thrombocytopenia may present suddenly with extensive bruising and mucosal bleeding; the platelet count is usually <10 x 10^9/L. These patients need referral for investigation and treatment.

The laboratory will look at a blood film in patients with thrombocytopenia to confirm thrombocytopenia, exclude "spurious thrombocytopenia" and to look for signs of haematological disease.

What is spurious thrombocytopenia?

- In some patients, platelets clump together in the "purple top" tube (containing EDTA), artificially lowering the platelet count generated by the analyser. These patients have normal numbers of platelets. A film comment saying there are platelet clumps will be reported. A true platelet count can be obtained by requesting a "platelet clumping screen" via webICE. This is performed on a sample taken into a "blue top" tube (containing citrate).
- Difficult venepunctures may cause platelet clumping or clots in the sample; a film comment saying there are platelet clumps or fibrin strands will be reported. The FBC should be repeated.
- Very rarely patients may have congenitally large platelets which are not counted by the analyser (e.g. May-Hegglin anomaly).

What acute causes of true isolated thrombocytopenia should I consider?

- The commonest cause is acute ITP which is autoimmune or caused by infections e.g. EBV/CMV or occasionally drugs – e.g. quinine.
- Much rarer causes include thrombotic thrombocytopenic purpura and the haemolytic uraemic syndrome (both associated with anaemia).
- Normal pregnancy can also cause thrombocytopenia – seek advice.

What chronic causes should I consider?

- Chronic liver disease e.g. non-alcoholic steatohepatitis.
- Chronic ITP which is autoimmune and may occur with other autoimmune disorders such as SLE or rheumatoid arthritis.
- Infections e.g. chronic hepatitis or HIV; malaria may also cause thrombocytopenia.
- Drugs e.g. some antibiotics, anticonvulsants, anti-rheumatic drugs, diuretics.
- In the elderly – myelodysplasia (but usually associated with other FBC abnormalities e.g. macrocytic anaemia or neutropenia).

What treatment is required for chronic thrombocytopenia?

- An underlying cause should be considered as treatment may ameliorate thrombocytopenia e.g. liver disease, SLE; review drugs carefully.
- The majority of patients with chronic ITP are asymptomatic and do not require treatment.

What other advice should I give?

- Patients should be advised to avoid NSAIDs and aspirin if possible as these drugs interfere with platelet function.
- Patients should be asked to return for FBC if they develop symptoms and signs of acute thrombocytopenia e.g. mucosal bleeding, bruising and a petechial rash.
- Lifestyle should be reviewed – sports etc which could involve head trauma may be better avoided.
- Tranexamic acid may be useful for menorrhagia.

- "Adequate" platelet counts for procedures in patients with immune thrombocytopenia as recommended by the international consensus guidelines are listed below. For patients with other causes of thrombocytopenia different thresholds may be applicable

dentistry

routine >10 x 10^9/L
simple extractions >30 x 10^9/L
complex extractions > 50 x 10^9/L
regional dental block >30 x 10^9/L

surgery

minor > 50 x 10^9/L
major > 80 x 10^9/L
involving the CNS > 100 x 10^9/L

When should I seek further advice or refer?

- Patients with acute thrombocytopenia should be referred to haematology as they may require treatment.
- Patients who have signs of underlying disease e.g. liver disease, should be discussed with appropriate specialist.
- Patients with initial isolated thrombocytopenia occasionally develop progressive blood count changes suggestive of a marrow problem e.g. anaemia – if this occurs (and is not iron deficiency) please discuss with haematologists.
- Pregnant patients who develop thrombocytopenia need joint haematological/obstetric management.

If patient is not referred to a specialist what follow up is recommended?

- Asymptomatic patients with chronic stable thrombocytopenia do not require regular FBCs; but it may be worth checking the platelet count if surgery is planned (see above)

References

Essential Haematology, 6th Edition. Hoffbrand and Pettit
BSH Guideline for the use of platelet transfusions (2016)
Blood Advances 2019: Updated international consensus report on the investigation and management of primary immune thrombocytopenia