

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 $>20 \times 10^9/L$ 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 $<10 \times 10^9/L$. 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 may be 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.

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- 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 as recommended by the BCSH are:
 - dentistry**
 - routine $>10 \times 10^9/L$
 - extractions $>30 \times 10^9/L$
 - regional dental block $>30 \times 10^9/L$
 - surgery**
 - major $> 50 \times 10^9/L$
 - involving the CNS $> 100 \times 10^9/L$

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

Blood 2010: International consensus report on the investigation and management of primary immune thrombocytopenia

[BSH Guideline](#) for the use of platelet transfusions (2016)