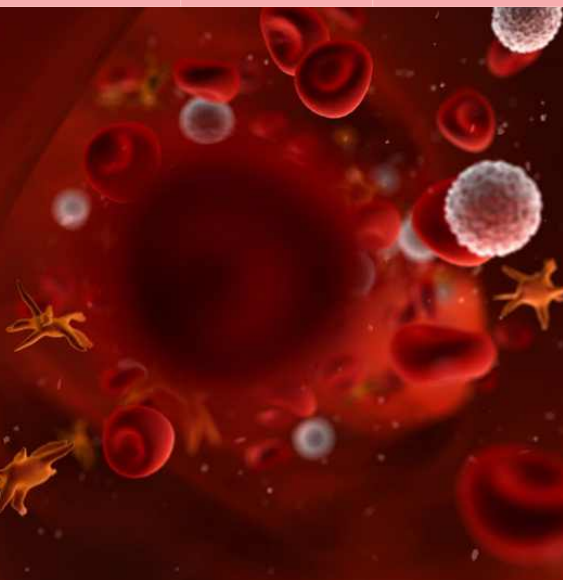


Low Platelet Count: Thrombocytopenia



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Introduction:

Platelets are one of the cells in the blood and are produced in the bone marrow where lies the factory of blood. Blood is composed of two components, plasma (fluid component) and cells (cellular component). There are three types of cells in blood, red blood cells, white blood cells and platelets. A normal human platelet count ranges from 150,000 to 450,000 platelets per microlitre of blood.

Signs and Symptoms:

Often, mild reduction in platelet count (platelet count less than normal but $> 30\,000$) does not lead to clinical problems; rather, they are picked up on a routine complete blood count (CBC). Occasionally, there may be bluish reddish patches on the skin (bruising), pin point bleeding on the skin, nosebleeds and/or bleeding gums.

It is vital to ensure that the low platelet count is not associated with reduction in other blood cells like red blood cells and white blood cells. Also the acute secondary causes like malaria, dengue etc must be ruled out.

Common causes of low platelet counts are

- Infections like malaria, Dengue.
- Deficiencies of vitamins like vitamin B12 , Folic acid
- Medicine toxicity like chemotherapy drugs
- Reduce production from bone marrow on in patients with leukemia, aplastic anaemia etc
- Immune thrombocytopenia like ITP

A person with low platelet count may also complain of malaise, fatigue and general weakness (with or without accompanying blood loss). Platelet count of $<30,000$ can be dangerous with risk of serious bleeding particularly in elderly people. The risk of bleeding is compounded if the patient is also on anti-platelets and blood thinners.

Diagnosis

Laboratory tests include: full blood count, liver enzymes, renal function, vitamin B12 levels, folic acid levels and peripheral blood smear. If the cause for the low platelet count remains unclear, a bone marrow biopsy is usually recommended, to differentiate whether the low platelet count is due to decreased production or peripheral destruction in the blood. Bone marrow examination also rules out other bone marrow conditions at the same time.

Treatment

Treatment is guided by cause and severity. The main concept in treating thrombocytopenia is to eliminate the underlying problem, and to transfuse platelet to avoid bleeding, if necessary.

There are several medicines used to increase platelet production. Steroids are the commonest amongst them. Vitamin B12 and folic acid supplements are given in deficient patients to stimulate the bone marrow production of platelets. Platelet transfusions may be used to stop bleeding in severe thrombocytopenia.

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