



## No.16 – A summary of low platelet

Platelet article reprinted from: **Dec 05**

Title: **A Lot Rest On Your Platelets**

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*In this article Dr Ali describes various causes of low platelet counts. ITP is not mentioned by name, but falls into the category of increased platelet destruction. This appeared in the East London and West Essex Guardian and is reprinted with kind permission of Martin Oldaker, Editor-in-Chief.*

UNEXPECTED bleeding or bruising can sometimes be the result of something called thrombocytopenia, the term used for a reduced platelet count. It occurs when platelets are lost from the circulation faster than they can be replaced from the bone marrow where they are made. Thrombocytopenia may result from a failure of platelet production and/or an increased rate of removal from the blood.

Platelets are tiny cells which circulate in the blood and whose function is to take part in the clotting process, they are essential in the formation of blood clots to prevent haemorrhage. In the event of haemorrhage, muscles in the vessel wall contract and reduce blood flow, the platelets then stick to each other and hold on to the vessel wall, resulting in normal liquid blood becoming an insoluble clot or glue.

The platelet count in the circulating blood is normally between 150 and 400 million per millilitre of blood but there are a number of causes of a low platelet count which are described below.

**Artefactual Thrombocytopenia:** Some people have platelets that stick together due to the presence of proteins in the blood that bind to the platelets. These antibodies, which are formed by the immune system of the body also bind to a chemical in the blood that is tested in test tubes giving a falsely low platelet count.

**Congenital Thrombocytopenia:** Several rare inherited diseases can cause low platelet counts. The severity of the thrombocytopenia varies with the condition and also the individual patient.

**Impaired platelet production:** Platelets, as with the rest of the blood cells, are produced within the bone marrow and the cells from which platelets originate are called megakaryocytes. If there is a problem in the bone marrow, for whatever reason, this can lead to a lowering of the number of platelets produced, Examples of abnormal cells accumulating in the bone marrow include acute leukaemia or other cancer cells.

**Increased platelet destruction:** Platelet numbers can fall if they are removed from circulation more rapidly than they are produced. Platelets can be removed or used up for several reasons such as severe infection like meningitis or as a complication of pregnancy or labour.

There are a number of treatments available and this would depend upon the severity of the thrombocytopenia and its cause. If life-threatening bleeding occurs then urgent treatment with platelet concentrates provided by a hospital is generally required.

The management of acute bleeding in a patient also involves treatment of the underlying cause of low platelets. Where there is no major haemorrhage the treatment is aimed at the cause of the low platelet count. If a drug is thought to be the cause then it is stopped. If an infection is suspected for the low count, it can be treated with antibiotics.

For some infections, especially viral ones such as glandular fever there is no specific treatment and close observation may be necessary. If the count is low due to abnormal or malignant cells such as leukaemia, then treatment is directed at those abnormal cells, such a chemo or radiotherapy.