Thrombocytopenia [1]

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Thrombocytopenia is a condition in which a person's blood has an unusually low level of platelets. Platelets, also called thrombocytes, are found in a person's blood. They stop bleeding by helping the blood to clot and plugging damaged blood vessels. Thrombocytopenia happens when the body does not make enough platelets, is losing platelets, or destroys platelets. Thrombocytopenia is common in people with cancer, especially in those receiving chemotherapy.

Signs and symptoms

Relieving side effects?also called symptom management, palliative care [3], or supportive care?is an important part of cancer care and treatment. Talk with your health care team about any symptoms you experience, including any new symptoms or a change in symptoms.

People with thrombocytopenia may experience some of these symptoms:

- Unexpected bruising
- Small purple or red spots under the skin, called petechiae
- Bleeding from the nose or gums
- Heavier than usual menstrual periods in women
- Black or bloody bowel movements or red- or pink-colored urine
- Bloody vomit
- Severe headaches
- Dizziness
- Pain in the joints or muscles
- Increased weakness

Tell your doctor about any symptoms of thrombocytopenia immediately. Often, symptoms do not occur until the level of platelets is very low. Many patients do not know they have thrombocytopenia until it is diagnosed during a blood test.

Causes

Platelets and red and white blood cells are made in bone marrow, the soft, spongy tissue found inside larger bones. Some types of chemotherapy [4] and other medications damage the bone marrow, lowering its production of platelets. However, thrombocytopenia caused by chemotherapy is usually temporary. Rarely, the chemotherapy may permanently damage some of the bone marrow cells that make platelets.

In addition, a person's body can make specialized proteins called antibodies that cause a person?s immune system to attack platelets. Normally, antibodies help destroy substances that appear harmful to the body, such as bacteria and viruses, but sometimes this process works incorrectly and antibodies are produced that destroy healthy parts of a person?s body.

Radiation therapy alone usually does not cause thrombocytopenia, unless a significant amount of radiation is directed at the pelvis, the patient is receiving chemotherapy at the same time, or the cancer spreads to the bone.

Thrombocytopenia may also occur when cancer cells, such as leukemia or lymphoma cells, crowd normal bone marrow cells. Although rare, thrombocytopenia can occur when other cancers, such as prostate or breast cancer, spread to the bone marrow. Cancer of the spleen is another uncommon cause of thrombocytopenia. Excess platelets are stored in the spleen, and cancer of the spleen can cause the spleen to enlarge, trapping too many platelets.

Diagnosis

Thrombocytopenia is diagnosed with a blood test called a platelet count, which counts the number of platelets in a sample of blood. People with some types of cancer or those who are undergoing a type of cancer treatment known to cause thrombocytopenia may receive regular blood tests to look for thrombocytopenia and other blood-related complications.

Management

People whose platelet counts drop while receiving chemotherapy may switch to a lower dose or wait longer between chemotherapy cycles. In addition, some patients receiving chemotherapy may be given a drug called oprelvekin (Neumega) to help prevent severe thrombocytopenia. Because of the risk of bleeding, your doctor may delay any cancer surgery until your platelet counts are restored to a normal level.

Meanwhile, people with a low platelet level may receive a transfusion of platelet cells to prevent spontaneous, heavy bleeding. However, transfused platelets only last about three days, and some patients may need multiple transfusions. In general, platelets received through a transfusion do not last as long in patients who have received many transfusions.

Along with treatment from your doctor, the following tips will help you avoid problems if your platelet level is low:

- Don't drink alcohol or take any medications without first asking your doctor because these can make bleeding problems worse.
- Use an extra soft toothbrush, and don't floss if your gums bleed.
- Blow your nose gently using a soft tissue.
- Be careful using scissors, knives, needles, or tools.
- Take steps to prevent burns while cooking.
- Shave with an electric razor.
- Avoid contact sports and other activities that might cause injury.

More Information

ASCO Answers Fact Sheet: Thrombocytopenia (PDF) [5]

Bleeding Problems [6]

Clotting Problems [7]

Side Effects [8]

Links:
[1] http://www.cancer.net/navigating-cancer-care/side-effects/thrombocytopenia
[2] http://www.cancer.net/about-us
[3] http://www.cancer.net/node/31921
[4] http://www.cancer.net/node/24723
[5] http://www.cancer.net/sites/cancer.net/files/asco_answers_thrombocytopenia.pdf
[6] http://www.cancer.net/node/25243
[7] http://www.cancer.net/node/25245
[8] http://www.cancer.net/node/25238