

Title:

Particularities of Different Types of Leukemia

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503

Summary:

Leukemia is a form of cancer that occurs at the level of the spinal marrow. Inside the spinal

Keywords:

childhood leukemia, acute leukemia

Article Body:

Leukemia is a form of cancer that occurs at the level of the spinal marrow. Inside the spinal marrow there is a type of immature blood cells that are called stem cells. These cells have a neutral initial state and later develop into different types of blood cells (white blood cells, red blood cells and platelets). Leukemia interferes in the normal process of cell maturation, leading to an accumulation of partially developed blood cells in the marrow, blood and later in body organs. Most of these resulted cells are inefficient inside the organism, as they can't carry out the activity of normal blood cells.

Depending on to the rate of development, the disease can either be acute leukemia (developing very rapidly), or chronic leukemia (slow developing).

Particular to acute leukemia is the inability of stem cells (immature cells that can be found within the bone marrow) to reach the state of maturity. These immature blood cells tend to continuously divide and they accumulate in the bloodstream. Acute leukemia develops very rapidly and people who suffer from it need immediate treatment and specific therapy. If mistreated or ignored, acute leukemia causes the death of affected patients within a few months. While certain forms of acute leukemia are usually successfully treated, other forms don't respond well to the specific treatment.

A characteristic of the chronic type of leukemia is that the diseased cells usually come from more mature cells, but in most cases they aren't developed normally. The leukemia cells have long periods of life and they tend to accumulate within the bloodstream. Although normal people have between 5000 and 10000 white blood cells in their body, people who suffer from chronic leukemia may have more than 100000.

Lymphocytic and myelogenous types of leukemia are developed from different types of cells: the lymphocytic type of leukemia develops from cells called lymphoblasts or lymphocytes in the spongy tissue of the bones, while the myelogenous type of leukemia (sometimes referred to as myeloid and myelocytic leukemia) develops from myeloid cells. Judging by the types of cells involved in the development of leukemia and by the rate of cellular division specific to each form of the disease, the main types of leukemia are: acute myelogenous leukemia (AML), chronic myelogenous leukemia (CML), acute lymphocytic leukemia (ALL) and chronic lymphocytic leukemia (CLL).

In addition to the common forms of chronic leukemia, there are also some rare types. Hairy cell leukemia (HCL), just like chronic lymphocytic leukemia, has a slow progression. The cells of hairy cell leukemia are different from other diseased cells mainly through their aspect. Hairy cell leukemia doesn't usually respond well to treatment. Prolymphocytic leukemia is a very rare and unusual form of chronic lymphocytic leukemia.

Some cancers, called lymphomas, are caused by abnormal blood cells that are present in the lymph nodes, liver, spleen or other organs. These particular types of cancer don't occur at the levels of the bone marrow and have a development that is not characteristic to most forms of lymphocytic leukemia.