### **Mini-Medical School**



# Acute lymphocytic leukemia (ALL) 白血病(英文)

### Definition

Acute lymphocytic leukemia (AL L) is a fast-growing cancer in which the body produces a large number of immature white blood cells ( lymphocytes). These cells can be found in the blood, bone marrow, lymph nodes, spleen, and other organs.

#### Causes

ALL makes up 80 % of childhood acute leukemias. Most cases occur in children ages 3 - 7. The disease may also occur in adults.

In acute leukemia, cancerous cells multiply quickly and replace normal cells. Cancerous cells take over normal parts of bone marrow, causing bone marrow failure. A person with ALL is more likely to bleed and have infections because there are fewer normal blood cells. Most cases of ALL have no obvious cause. However, chromosome problems, radiation, toxins such as benzene, and some chemotherapy drugs may play a role in the development of leukemia.

Persons with Down syndrome or who have a brother or sister with leukemia have an increased risk for ALL.

### Symptoms

- Bleeding gums
- Bone pain or tenderness
- Easy bruisingE
- xcessive or prolonged bleeding
- Fatigue
- Fever
- Joint pain

- Infection
- Menstrual irregularities
- Nosebleeds
- Paleness
- Swollen glands ( lymphadenopathy )
- Unintentional weight loss

## Treatment

The goal of treatment is to get the blood counts and the bone marrow to normal. If this occurs, the cancer is considered to be in remission.

If you have acute lymphocytic leukemia, you'll need chemotherapy. For the first round of chemotherapy, you may need to go to the hospital for 3 - 6 weeks, but may later get chemotherapy on an outpatient basis. If you have a low white blood cell count, you may need to be placed in a room by yourself so you do not catch an infection.

Additional treatments depend on other symptoms. They may include:

- Transfusion of blood products, such as platelets or special red blood cells, to fight anemia
- Antibiotics to fight infection

If you go into remission, you may receive additional chemotherapy or radiation therapy to kill any cancer cells that are in the spinal fluid. You may also receive chemotherapy from time to time to prevent relapse.

If your leukemia returns or does not respond to other treatments, your doctor may recommend a bone marrow transplant after high-dose chemotherapy.

High-risk patients may need bone marrow or stem cell transplants.

# Outlook (Prognosis)

Children usually have a better outcome than adults. The majority of adults go into complete remission. Without treatment, a person with ALL can expect to live for about 3 months.

# **Possible Complications**

- Bleeding
- DIC (disseminated intravascular coagulation)
- Relapse of ALL

• Severe infection

When to Contact a Medical Professional

Call your health care provider if you develop ALL-like symptoms, or if you have ALL and you have a persistent fever or other signs of infection.

#### Prevention

Because the cause is usually unknown, it is not possible to prevent most cases. You may reduce your risk of ALL by avoiding exposure to toxins, radiation, and chemicals.

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