AML (Acute Myelocytic Leukemia)

Acute Myelocytic Leukemia (AML) is a type of blood cancer. It is also called acute myeloid leukemia. There are many types of AML.

CAUSES

The cause of AML is still not known. There can be some genetic and environmental factors in some cases.

SYMPTOMS

- Poor appetite.
- Tiring easily.
- Shortness of breath.
- Crankiness.
- Low-grade fevers.
- Bone pain.
- Joint pain.
- Pale skin.
- Bruising.
- Nosebleeds and easy bleeding from minor cuts.
- Swollen glands.
- Headache.
- Weight loss.
- Swollen gums.
- Lumps under the skin.
- Slow healing of cuts.

DIAGNOSIS

The diagnosis of AML is made by tests such as:

- Blood tests to check blood cell counts and the shape of the blood cells (*morphology*).
- Sampling parts of bone that make blood cells (*bone marrow*).
- Genetic testing.
- Sampling spinal fluid for leukemia cells.
- A biopsy of lumps to check for leukemia cells.

TREATMENT

The goal of treatment is to cure the AML. Treatment of AML is based on the child's age and test results.

Treatment is given in phases. The first phase of treatment is called induction therapy. The goals of induction therapy are to:

- Kill as many AML cells as possible.
- Bring the blood counts back to normal. A blood count gives information about a patient's blood.
- Get rid of all signs of the disease.

Depending on the type of AML, induction therapy may include:

- **Chemotherapy.** These medicines stop cancer cells from growing. These medicines either kill the cancer cells or stop them from increasing in number.
- **Intrathecal chemotherapy.** These medicines are placed in the fluid surrounding the spinal cord and brain. These medicines are placed through a spinal tap. This treatment is done if the AML has spread to the brain and spinal cord.
- **Radiation therapy.** This treatment uses X-rays. This is needed to treat AML that has spread from the blood or bone marrow. It may also be done to prevent AML from spreading to the spinal cord and brain.
- **Other anti-cancer medicines**. These may be used to kill AML cells or turn them into normal blood cells.
- New treatments that are under review.

A child's AML is in remission when there are no signs or symptoms and the blood counts have returned to normal.

After remission, the next phase of treatment is called consolidation/intensification therapy. The treatments during this phase depend on the type of AML. Treatments may include:

- **Chemotherapy.** This kills any remaining AML cells not detected in the bone marrow or blood.
- **Stem cell transplant**. This is done to restore the bone marrow's ability to produce blood cells. (Stem cells are a type of cell in the bone marrow or blood stream that make the 3 kinds of blood cells.)

- **Intrathecal chemotherapy**.
- **Radiation therapy.**

Most of the medicines and treatments of childhood leukemia have a number of side effects. They often produce hair loss, feeling sick to your stomach (*nausea*), diarrhea and throwing up (*vomiting*). Mouth sores and skin rashes are common. The treatments can also stop the bone marrow from producing normal amounts of various blood cells. This can lead to complications such as:

- Infection.
- Bleeding.
- Anemia.

Other treatments for AML include:

- Medicines that kill germs (*antibiotics*) to prevent a type of lung infection.
- Diet supplements to help with nutrition.
- Blood transfusions to treat anemia and other low blood counts.
- Medicines to prevent or treat nausea, vomiting and other side effects of cancer treatments.

HOME CARE INSTRUCTIONS

When your child is on chemotherapy:

- You and your child and any visitors should wash hands often. Wash hands before meals, after being outside and after using the toilet.
- Keep your child's teeth and gums clean and well cared for. Use a soft toothbrush.
- Talk with your caregiver about the safety of immunizations for your child and family members given your child's diagnosis.
- When visiting a healthcare facility, ask about side entrances or waiting areas where your child will not be exposed to infections.
- Only take over-the-counter or prescription medicines for pain, discomfort or fever as directed by your caregiver.
- Use a good sun block and clothing to prevent sun exposure.
- Usually it is recommended that the other family members receive an influenza shot every year.

SEEK MEDICAL CARE IF YOUR CHILD HAS:

- Cough or cold symptoms.
- Sore throat.
- Painful urination.
- Frequent diarrhea.
- Frequent vomiting.
- Skin rash.
- Been exposed to chicken pox or measles, especially if your child has not been immunized or is not immune to these illnesses.

SEEK IMMEDIATE MEDICAL CARE IF YOUR CHILD HAS:

- A fever of 100.4º F (38º C) or higher measured by mouth.
- Chills.
- Trouble breathing.
- Blood in urine or stools.

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