Aplastic Anemia

Aplastic anemia occurs when the soft material that makes up the hollow insides of your bones (*bone marrow*) stops making enough blood cells. These cells are:

- Red cells to carry oxygen.
- White cells to fight infection.
- Platelets to help your blood clot when you have an injury.

Your bone marrow continually makes new blood cells because they do not last very long. Red blood cells live about four months. Platelets last only one week and white blood cells last about a day. Anything that hurts or injures your bone marrow can cause aplastic anemia.

Aplastic anemia affects all age groups although it seems to appear a little more frequently in children. For unknown reasons, it also appears in people aged 20-25 and those over age 60. It usually develops slowly. In a few cases, symptoms can develop very quickly. There are many possible causes. Even after aggressive treatment, as many as 1 in 4 patients can die within the first year. Many are treated successfully but must be monitored for possible recurrent problems. Aplastic anemia is a rare and serious condition.

CAUSES

Some things that injure marrow can include:

- Radiation and chemotherapy treatment for cancer. These treatments used to kill cancer cells also damage other cells.
- Exposure to toxic chemicals used in some pesticides and insecticides may damage marrow.
- Some medications, such as those used to treat rheumatoid arthritis and some antibiotics, can cause secondary aplastic anemia.
- Autoimmune disorders in which your immune system begins attacking your own body cells.
- Viral infections can affect bone marrow.
- Pregnancy
- Idiopathic aplastic anemia makes up about half the cases of aplastic anemia. This means the cause is unknown.

SYMPTOMS

Red blood cells carry oxygen. A decrease in red blood cells will make you short of breath. White blood cells fight infection. Decreases in white blood cells make you more likely to get an infection. Platelets help your blood clot. Too few platelets can cause bleeding.

Other common signs and symptoms include:

- Fatigue.
- Light headedness or fainting.
- Shortness of breath and rapid heart rate with exertion.
- Pale skin and lips.
- Frequent infections.
- Easy bruising and bleeding.
- Nosebleeds and bleeding gums.
- Prolonged bleeding from cuts.
- Sore mouth.

DIAGNOSIS

- Blood tests and a bone marrow biopsy usually are used to find out what is wrong.
- A number of different problems can make one of your blood cells low, but when they are all low, it is more worrisome.
- Additional testing may be done to find the underlying cause for the anemia.

TREATMENT

You will usually be referred to a specialist in blood diseases (*hematologist*) or to a treatment center which specializes in the treatment of aplastic anemia. Severe aplastic anemia is life-threatening. You will need to be hospitalized. Mild or moderate aplastic anemia is still serious, but you may be treated as an outpatient unless complications develop. Treatments may include:

- Observation for mild cases.
- Blood transfusions.
- Medications. When anemia is from an autoimmune disorder, medications may be used to suppress the immune system. Medications are also available to stimulate marrow to make more blood cells.
- Bone marrow transplantation. This is a procedure where healthy marrow from a donor is given to the person with aplastic anemia. This is used for severe aplastic anemia. If a donor is found, the marrow that you have left is depleted with radiation. This is done so the remaining marrow does not try to fight against the healthy donor marrow. The healthy marrow is given into a vein and it goes to the bone marrow cavities where it will hopefully begin producing new blood cells.

This procedure carries risk. If the body rejects the transplant, it can be life-threatening. Not everyone is a candidate for transplantation. It requires a lengthy stay in the hospital. After the transplant, drugs to help prevent rejection are necessary. One other risk is the danger of catching a disease from the donor. Today the blood supply is the safest it has ever been. The risk is extremely small but still remains.

HOME CARE INSTRUCTIONS

- Get plenty of rest and eat a well balanced diet.
- Avoid excessive exercise. Long-term anemia can stress the heart.
- When platelets are at low levels and the risk of bleeding is greater, avoid all activities that risk injury.
- Protect yourself from infections by washing your hands often. Avoid crowds. Avoid being around sick people.

PREVENTION

Especially if you have had this problem before, avoid exposure to insecticides, herbicides, organic solvents, paint removers and other toxic chemicals.

SEEK IMMEDIATE MEDICAL CARE IF YOU DEVELOP:

- A temperature above 100º F (37.8º C).
- Flu-like feelings, signs of infection or more frequent infections.
- Blood in your urine or bowel movements.
- Easy bruising or bleeding from your gums or nose.
- Prolonged bleeding from cuts.
- Increasing shortness of breath or chest pain with exertion.
- A rapid heart rate with exertion.
- Increasing fatigue and tiredness.
- Light headedness or fainting.
- Pale skin and lips.
- A sore mouth.

MAKE SURE YOU:

- Understand these instructions.
- Will watch your condition.
- Will get help right away if you are not doing well or get worse.

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