HELLP Syndrome

HELLP syndrome is a life-threatening complication of pre-eclampsia during pregnancy.

Pre-eclampsia (*previously called toxemia*), is a disorder of pregnancy causing high blood pressure and protein in the urine. It develops after the 20th week of pregnancy. It is often seen in the last 3 months of the pregnancy. Pre-eclampsia can progress to more serious problems, such as:

- **Eclampsia:** This is severe pre-eclampsia, when convulsions or coma develops. Convulsions can occur while pregnant, during labor, during delivery, or after delivery.
- **HELLP Syndrome**: This is severe pre-eclampsia, resulting in problems of the liver, blood clotting problems, increasing blood pressure, and increase of protein in the urine. It can be fatal to both the mother and baby.

HELLP is an abbreviation of the main findings. They are:

- **H**emolytic anemia, hemolysis (*destruction of blood cells*).
- **E**levated **L**iver enzymes (*sign of liver damage*).
- **L**ow **P**latelet count (*lowered blood cells that help stop bleeding*).

CAUSES

- Pre-eclampsia is thought to be caused by the afterbirth (*placenta*) putting out chemicals that act on the lining of your blood vessels. The exact cause of HELLP syndrome is not known, but it is the worsening of pre-eclampsia. Pre-eclampsia may be related to changes in the immune system response in a pregnant woman.
- Both HELLP syndrome and eclampsia occur during the latter stages of pregnancy. Sometimes they happen after childbirth. A patient who develops HELLP syndrome has often already been seen for high blood pressure of pregnancy. Or she has already been suspected to have developed pre-eclampsia (*high blood pressure and excess protein in the urine*). Less than 1 in 10 cases of HELLP syndrome occur after delivery.

SYMPTOMS OF PRE-ECLAMPSIA

- Sudden onset of headaches.
- General weakness and discomfort (*malaise*).
- Stomach pain.
- Swelling from retained fluid (*edema*).
- Shortness of breath (*pulmonary edema*).
- Twitching, spasms (*hyperreflexia*).
- Slowing of the baby's growth.
- Blurred vision.
- Nausea or vomiting.
- Tingling in the limbs.
- Low urine output.
- Blue lips, fingernails, etc. (*cyanosis*).
- Protein in the urine.
- Fluid in the lungs (*pulmonary edema*).

DIAGNOSIS

In a patient with possible HELLP syndrome, blood tests are performed. This often includes:

- A full blood count.
- Liver enzymes.
- Kidney (*renal*) function.
- Salts in your blood (*electrolytes*).
- Blood coagulation studies (*test how well your blood clots*).

There are no tests available that can predict the onset of pre-eclampsia.

TREATMENT

There is no treatment available to prevent or cure pre-eclampsia.

The mother and baby must be continually monitored, with blood tests and ultrasound studies.

- All patients with pre-eclampsia, eclampsia, or HELLP syndrome should be treated in the hospital.
- A perinatologist and neonatologist should be present.
- A newborn intensive care unit should be available, when possible.
- The only treatment for advancing pre-eclampsia to eclampsia and HELLP Syndrome is delivery of the baby. This must be done by:
  - Giving medicines to start contractions (*induction of labor*). Or,
  - Removing the baby by Cesarean section surgery (*C-section*).
- Women can be treated for a short time with magnesium sulphate mineral, injected in the veins (*intravenous*). This reduces muscle contractions and blocks the impulse from nerves to the muscles. It is not known whether this mineral decreases the risk of seizures and progress to eclampsia. Medicines to lower and control blood pressure may also be used.
- Corticosteroids may be given.
- Continuous medical management and monitoring of the mother and baby is needed. This is true during pregnancy, during labor, delivery, and after delivery (*postpartum*).

RISK FACTORS THAT MAY RESULT IN DEVELOPING PRE-ECLAMPSIA:

- Previous history of pre-eclampsia.
- More often seen when pregnant with your first baby.
- Twins or multiple births.
- Pregestational diabetes (*diabetes that exists before pregnancy*).
- Being pregnant over the age of 35.
- African American women are more at risk.
- Women with chronic high blood pressure.
- Connective tissue disorders in pregnant women.
- Women with nervous system problems (*neuropathy*).
- Obesity.
- Antiphospholipid antibody syndrome. (*Causes blood clots in the veins and arteries, lowers the platelets that help stop bleeding*.)
- Lupus erythematosus (*skin disorder*).
- Kidney disease.

Document Released: 03/25/2008 Document Re-Released: 12/06/2010
ExitCare® Patient Information ©2011 ExitCare, LLC.