Can a history of multiple, severe preeclampsia(s) be reversed for future pregnancies? I have read of everything from aspirin therapy to weight loss to magnesium to especially high claims on quality of nutrition. Can you speak to these things, and any others that may decrease future risk?

Pre-eclampsia is an extremely troublesome condition that remains a major problem for pregnant women. Despite major advances, it continues to play a serious role in the morbidity of mothers, and in the perinatal mortality figures.

In an attempt to simplify the situation, it would seem reasonable to conclude that a substance or substances are released from the placenta, possibly in response to compromised placental blood flow. This results in a generalized “spasm” in the blood vessels of the maternal organism. This leads to compromised tissue perfusion and secondary effects. These effects include disturbances in kidney function, liver function, and in extreme cases to brain dysfunction and seizures. The word “eclampsia” comes from a Greek word meaning lightning, because seizures seem to arrive as a flash of lightning—out of the blue.

We have used the term that you used, pre-eclampsia, though other names are often given, such as toxemia. Whatever we call it, the condition is a major headache for the small group of perhaps 5 percent who develop it in their first pregnancy.

Three cardinal findings are watched for very carefully by those following pregnant women: edema or fluid retention, elevation of blood pressure, and proteinuria, which means protein in the urine. The exact mechanism at work has not been discovered. In recent years, however, a much greater understanding of mechanisms at work in those getting pre-eclampsia has been worked out, and many biochemical alterations have been noted.

We now recognize that there are early signs that warn of the impending problem. The multiple systems involved can also include elements of the blood. And a situation in which a microcoagulation process takes place in the vascular tree can result in a very serious condition in which the platelets are lowered, the clotting proteins are consumed, and internal bleeding can take place. Persons with this extreme situation can have bleeding under the liver capsule, and severe disturbances of liver function. This is called the HELLP syndrome (hemolysis, elevated liver enzymes, lowered platelets).

Prevention would certainly be desirable. Aspirin, as you mentioned, has been suggested and used with a measure of success to reduce the risk. There is no surefire preventative measure. Good nutrition and care to avoid excess sodium intake have been suggested. But prevention will be a matter of trial and error until we understand the full picture. Fortunately, the condition occurs predominantly in the first pregnancy. Although 20 percent of women having pre-eclampsia with their first pregnancy get it in the following pregnancy, that means that 80 percent do not.

Extra vigilance is called for in a woman whose first pregnancy was complicated by pre-eclampsia. Many years ago bed rest was demonstrated to result in subsidence of early signs of pre-eclampsia in the majority (up to 90 percent) of pregnant women. Nevertheless, those who continue to be hypertensive will often progress to more extreme manifestations of the condition, and the lives of both the baby and the mother can be at risk. Termination of the pregnancy is often the only way the condition can be stopped. Fortunately,
pre-eclampsia seldom presents itself before 26 weeks of pregnancy, and babies these days can be supported in high-risk nurseries with excellent outcomes. Often treatment is aimed at palliating the pre-eclampsia in order to gain time and ensure greater fetal lung maturity.

In cases in which there is a repetition of the condition in succeeding pregnancies, it is often later in its appearance, which means better chances for successful outcomes of the pregnancy.

Magnesium has been suggested as a suitable supplement during pregnancy, but its most notable use has been a traditional role in controlling the nervous excitability and seizures in severe pre-eclampsia. Its use in this case is intravenous, and is not a long-term option; rather, it is a stabilizing influence for a situation preparatory to arranging delivery either by induction of labor or cesarean section.

We cannot stress too much that the most beneficial prevention is that provided by a careful and alert caregiver during pregnancy.

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