October 2009-Obesity in Pregnancy

We are all aware that obesity has become a national problem. One cannot avoid news articles warning of dietary indiscretion, taxes on soft drinks, childhood obesity, lack of exercise and the life style changes that cause diabetes, hypertension, and heart disease. When obesity is encountered in pregnancy it affects all aspects of pregnancy from conception through the post partum period. As an obstetrician I am terrified of the potential for adverse maternal and fetal outcomes including maternal mortality. Counseling about the very real risks must be discussed before pregnancy, during the pregnancy, during the delivery process, in the operating room and during the post partum period.

Obesity is no longer characterized subjectively. There is now objective measurement for definition. Body mass index (bmi) is calculated by dividing the weight in kilograms by the height in meters squared. Sounds complicated but we have charts to calculate this. Suffice it say that a BMI of greater than 35 is obese and greater than 40 is morbidly obese. It is incumbent upon us in the medical field to identify BEFORE conception those women who are obese and to discuss with them the risks both maternal and fetal. A reasonable goal is weight loss of one to two pounds/week through dietary changes (not fad diets or over the counter weight loss medications) and increased physical activity of thirty minutes of vigorous exercise most days of the week. Nutritionist counseling may be beneficial to correct a lifetime of dietary indiscretion and bad eating habits.

I am reluctant to mention that there are prescription drugs that can help in weight loss. Reluctant because patients tend to think that a mere pill is a panacea for obesity. However, there is some benefit is administered wisely. They cannot be used in pregnancy.

There are now recommendations that for women who are morbidly obese and who have co morbidities such as diabetes and hypertension bariatric surgery such as gastric banding and gastric bypass might be less risky that carrying a pregnancy while massively obese with attendant complications of vaginal or cesarean delivery. It is well known that obese women have more difficult labors secondary to poor muscle mass and that when delivering vaginally the fetal head can be trapped in body fat with resultant damage to the baby's shoulders. Cesarean delivery is risky also because of the technical difficulties in operating upon an obese woman, increased risk of bleeding, blood clots and damage to other organs, anesthesia risks, and wound infections.

Obese women also have elevated triglycerides and cholesterol and increased risk of gall bladder disease and heart disease so these must be addressed before conception if possible. However, most of the time the obese patient presents to us already pregnant so the treatment is after the fact and aimed to maximize the outcome to the fetus and to the patient herself.
Each trimester of pregnancy in the obese patient presents a challenge. In the first trimester (0-12 weeks) timing the pregnancy is difficult as obese women have irregular periods and uterine measurements are technically difficult. Ultrasound is important here

to help in determining the due date. Parenthetically obese women have a three times greater risk of miscarriage. Care must be taken to screen for diabetes, hypertension, and renal disease. We will discuss the increased risks of fetal defects, stillbirth, toxemia, induction of labor and cesarean section. Normally a weight gain of 25-30 pounds is recommended in pregnancy but a 10 pound weight gain is recommended in the obese patient.

Second trimester (12-28 weeks) is characterized by a greatly increased risk of diabetes as the placenta grows and inhibits maternal insulin. Glucose testing is done now as well as ultrasound to rule out fetal anomalies. Obese doubles the risk of neural tube defects (spina bifida), heart defects, small limbs, hernias, and penis abnormalities.

Third trimester (28-40 weeks) - blood pressure must be monitored carefully because of the increased risk of toxemia (preeclampsia). Fetal growth must be assessed but measurements are difficult in the obese patient as well as difficult with ultrasound. At this time an anesthesia consult might be entertained since a spinal or epidural is technically difficult and general anesthesia is risky and challenging.

Now that we have gotten the obese pregnant patient to term, the challenges really begin. That is, delivery. Obese women are induced 35% times than non obese women because of large babies, hypertension and diabetes. Labor in obese women is difficult for reasons that are not entirely clear so the risk of cesarean section is increased. Shoulder dystocia (that is difficult in delivery the shoulders of the fetus) is an obstetrical nightmare and greatly increased in the obese patient. Accordingly more c-sections are performed in this group for this reason and for the difficult labor. But c-sections pose their own risks. It is well known that the risk to the mother is five times greater than a vaginal birth given the increased risks of anesthesia, blood clots, bleeding and damage to other organs. Difficult wound closure and increased infection risks because of concurrent diabetes or the incision buried under the fat layer (panniculus) further complicate the picture. Prophylactic antibiotics and compression stockings help to avoid both but are no guarantee that complications will not occur.

Lastly, breast feeding and weight loss should be encouraged during the postpartum period as both decrease the risk of future diabetes and heart disease by 22%.

A lifetime of seeking wellness and optimum weight will empower women to have healthy pregnancies, a healthy delivery and future that insure dancing at the wedding of the offspring.