PRETERM LABOR -- INTERVENTIONS TO DECREASE INCIDENCE

Every year in this country pregnancies are adversely affected by early, unplanned delivery. In the past evaluation and treatment have been reserved for women who have had a prior preterm birth. New science now confirms existence of meaningful screening process and efficacious interventions for all pregnant women, not just those with a history of prematurity.

This is an important consideration because preterm birth has increased from 9.4% to 12.8% of all births in the United States from 1981 to 2006. Two thirds of preterm births are spontaneous (with or without premature rupture of membranes) while the other one third are indicated preterm deliveries secondary to pre-eclampsia, intra-uterine growth restriction or other obstetric and medical conditions. Prematurity is a leading cause of neonatal morbidity and mortality accounting for 60 – 80% of all infants without congenital anomalies. Only 1 – 2% of preterm births occur at less than 32 weeks but these account for 60% of the perinatal mortality and about 50% of all cases of long-term neurological morbidity. Significantly reducing prematurity will be of great benefit in improving outcomes.

Desert Women’s Care is now screening for short cervix during the mid-trimester ultrasound examination. Vaginal ultrasound is done to measure the cervical length in the midline, longitudinal plane. A short cervix is defined as one < 25 mm (10th percentile for cervical length in the literature). Asymptomatic pregnant women in the mid-trimester with short cervix are then treated with vaginal progesterone. Either Crinone gel 8%, 1.125 grams (90 mg progesterone dose) or a 200mg Progesterone suppository is administered vaginally every day until delivery.

Romero and associates have recently reported a meta-analysis of five trials of high quality data confirming the benefit of progesterone treatment in women with asymptomatic short cervix. The following conclusions are observed:

1. Significant reduction in rate of preterm birth < 28 weeks;
2. Significant reduction in rate of preterm birth < 33 weeks;
3. Significant reduction in rate of preterm birth < 35 weeks;
4. Significant reduction in respiratory distress syndrome;
5. Significant reduction in birth weight < 1500 grams;
6. Significant reduction in Neonatal Intensive Care Unit admissions;
7. Significant reduction in requirement for mechanical ventilation.

These trials did not specifically address the very small subset of women with cervix less than 10 mm in the mid-trimester. Cervical incompetence may be diagnosed in this group. Diagnosis is more likely in women with prior excisional cervical biopsies, prior Dilation & Curettage or prior preterm delivery.

Women with no prior history of prior preterm delivery having a cervical length of < 10 mm may be candidates for emergency cerclage. Cerclage is a procedure wherein a mersilene band is placed around the cervix, either vaginally or laparoscopically, to help hold it closed. Desert Women’s Care has particular expertise in placing laparoscopic cervical cerclage.
Activity restriction and bed rest have been long-held tenets of management for women at risk for premature delivery. Recently Groban and colleagues\(^{12}\) studied asymptomatic, nulliparous women with short cervix treated with weekly injections of 17-hydroxy Progesterone. Short cervix was diagnosed on a screening ultrasound. One group was asked to reduce activity and the other was allowed normal activity. Activity restriction did not reduce the rate of preterm birth in these asymptomatic women with short cervix. DWC agrees that activity restriction does not improve outcome.

**References**