in the late luteal phase. This method has drawbacks, however, since the safety of these drugs at such a crucial time of early possible pregnancy has not been established.

Side effects of prostaglandin inhibitors are reported to be mild and dose related. They may include: persistent severe headache, severe gastrointestinal symptoms, rash, blurred vision, corneal deposits, retinal disturbances, ulcerations leading to perforation of the esophagus, stomach or gut, aplastic anemia, hemolytic anemia, agranulocytosis, renal toxicity, and mild hepatic toxicity. In the drugs tested, no fetal anomalies could be induced in mice, rats, rabbits, or dogs.

In conclusion the authors suggest that local administration of prostaglandin antagonists may be the best means of delivering the drug to the desired area while avoiding the side effects found with systemic administration. This could be accomplished either by means of a medicated intrauterine device or vaginal or rectal suppositories.

Moderate Fetal Bradycardia not Indicative of Distress

Young B, Katz M, Klein S, Silverman F: Fetal blood and tissue pH with moderate bradycardia. Am J Obstet Gynecol 135:45, 1979.

Moderate fetal bradycardia is defined as a baseline fetal heart rate of 100 to 119 beats per minute. In this study, eleven patients classified as high risk for other reasons were demonstrated by electronic monitoring to have sustained moderate fetal bradycardia. All were followed with continuous tissue pH and intermittent scalp blood pH. This group of eleven was 5.3% of 2285 patients monitored over a 15 month period, and it was 15% of the high-risk patients.

The average duration of the moderate bradycardia was 48.8 minutes, and fetal blood pH's were all within the normal range. All the infants were in the occiput posterior or occiput transverse position during this period, and all the bradycardia was relieved upon anterior rotation of the fetal head. Umbilical artery pH showed no acidosis in any of the cases studied, and was the same as the scalp blood pH prior to the onset of the bradycardia. Neonatal outcomes and Apgar scores demonstrated no signs of fetal distress in any cases, confirming the author's hypothesis that moderate bradycardia is not indicative of fetal distress.

Serum Estriols Low after Cortisol Therapy

Kirkpatrick C, Alexander S, Vanbellinghen A, Schwers J: Serum unconjugated estriol after intravenous cortisol administration in late pregnancy. Obstet Gynecol 53:627, 1979.

This study investigated the effects of corticoid therapy on estrogen production in late pregnancy, specifically with regard to serum unconjugated estriol levels, the commonly used indicator of fetal well-being.

Forty-four subjects admitted with threatened premature labor were given a total of 5 grams of cortisol (Solu-Cortef) and estriol levels were monitored during the administration and for the three subsequent days. After 24 hours the mean serum unconjugated estriol concentration had dropped to 27% of the initial value. Recovery was slow, reaching the approximate starting levels on the third day after treatment.

In summarizing other researchers results in similar studies, the authors note a wide range of individual variation in the timing of recovery to normal levels, ranging from 2 to 15 days. They conclude that "low estrogen levels after corticotherapy do not necessarily indicate fetal distress, and only normal values should be taken into consideration during the first week posttreatment."

Copper Levels Low in Patients with PROM

Artal R, Burgeson R, Fernandez F, Hobel C. Fetal and maternal copper levels in patients at term with and without premature rupture of membranes. Obstet Gynecol 53:608, 1979.

Recent studies have shown that there may be measurable differences between prematurely and nonprematurely ruptured amniotic membranes. These differences seem to be related to elasticity and membrane thickness. Since copper deficiency has been shown, in research on chicks, to inhibit collagen and elastin maturation, it has been postulated that copper deficiency may be involved in the development of thin, easily ruptured membranes.

In this study, involving 14 subjects with normal term deliveries and 11 subjects with premature rupture of the membranes (PROM) for at least 12 hours prior to the onset of labor, both maternal and fetal serum levels of copper were found to be significantly lower among the subjects with premature rupture of membranes. Despite the similarity of mean gestational age in the two groups, the PROM group was found to have delivered babies with significantly lower birth weights as well.

The authors suggest that this prevalence of low birth weights may be correlated with a nutritional deficiency or metabolic defect resulting in copper deficiency. This is consistent with other studies which have shown copper deficiency in small premature and malnourished infants.