

Foreword

Management of Preterm Birth: Best Practices in Prediction, Prevention, and Treatment

We have not focused on an issue in the *Obstetrics and Gynecology Clinics of North America* about preventing or delaying preterm delivery in several years. Many advances have received attention in the past decade, so we wish to provide an important update on “Management of Preterm Birth.” While numerous management methods have incorporated such diagnostic evaluations as cervical length measurements and the presence or absence of fetal fibronectin, the incidence of preterm birth has changed little over the past 40 years. Uncertainty continues about the best strategies for managing preterm labor.

Infant mortality and a wide variety of morbidities, largely due to organ system immaturity, are significant among infants born very prematurely. Because of tremendous advances in the perinatal and neonatal care, increasing survival of immature infants has prompted continued reassessments about the lower limit of fetal maturation that is compatible with extrauterine life and also long-term sequelae such as neurodevelopmental disability.

Deliveries of infants in the late preterm period contribute to the increasing morbidity and costs in newborn care. These infants account for approximately 75% of all preterm births, and they constitute an increasing proportion of all singleton preterm births in the United States. As such, late preterm birth is receiving more attention in optimizing obstetrical decision-making.

Less than half of all preterm births are preceded by spontaneous labor alone. Reasons for spontaneous preterm labor and birth are multiple. Interacting comorbidities (eg, genital tract infection and periodontal disease) are described and questioned in this issue. These antecedents and contributing conditions are essential to consider, since they confound efforts to prevent and manage pregnancies at risk of preterm delivery. Approximately one-third follow preterm rupture of membranes, while one-fourth are indicated or mandated. Much of the increase in preterm deliveries in the United States is explained by rising numbers of indicated births in singleton gestations.

While prevention of preterm birth remains elusive, this issue addresses many strategies that may be achievable in select populations. The authors cite several meta-analyses to help clarify conflicting results surrounding prophylactic therapies, such as maternal progesterone and cervical cerclage. In the absence of maternal or fetal indications necessitating pregnancy intervention, management strategies described in this issue are intended to forestall preterm birth. Women identified as being at risk for preterm birth or who present with signs and symptoms of impending preterm delivery are often candidates for such medical interventions as

antenatal corticosteroids and antibiotics that are intended to improve neonatal outcomes.

Management strategies are greatly influenced by accurate gestational dating. For well-dated pregnancies less than 34 weeks with no mandate for delivery, close observation with monitoring of uterine contractions and fetal heart rate patterns is appropriate, along with periodic cervical examinations to search for any change. For women not in advanced labor, many practitioners believe it is appropriate to prescribe intravenous magnesium sulfate initially as an attempt to inhibit contractions and potentially provide neonatal neuroprotection. The mother-to-be is also customarily given corticosteroid therapy before 34 weeks and group B streptococcal antibiotics prophylaxis at any preterm age.

Information in this special issue represents the opinions of qualified experts in maternal fetal medicine. Their contributions in providing thoughtful and balanced approaches to designing management guidelines are noteworthy. Their input is particularly important in addressing patient's and family's preconceived impressions and in providing certain practical educational lessons to both the practicing obstetrician and our valued patients.

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