

MEDICAL AND SURGICAL INTERVENTIONS AVAILABLE BEFORE A PERIVIABLE BIRTH

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Infants born at very early gestational ages pose significant challenges to both the obstetric and neonatal clinical teams. In May 2014, the Eunice Kennedy Shriver National Institute of Child Health and Human Development(NICHD), in conjunction with the Society for Maternal-Fetal Medicine(SMFM), the American College of Obstetricians and Gynecologists(ACOG), published the results of a joint workshop on periviable birth. Periviable birth was defined as delivery occurring from 20 0/7 weeks to 25 6/7 weeks of gestation. Approximately 0.5% of all births occur before the third trimester of pregnancy, and these very early deliveries result in the majority of neonatal deaths and more than 40% of infant deaths. Antecedent risk factors for periviable birth, though geographically heterogeneous, include nulliparity and multiple gestations, each accounting for one-third and one-fourth of all periviable births, respectively. Spontaneous preterm labor precedes 34% of these deliveries and premature rupture of membranes in 25%. The pregnancy was complicated by hypertensive disease in 21% and bleeding and chorioamnionitis in 18% each. Over 50% of these births are cesarean deliveries.

The therapies commonly prescribed in order to prolong gestation include bed rest, tocolysis, progesterone, and cerclage. Cervical cerclage has the greatest promise at reducing morbidity and mortality related to periviable birth even though it may not reduce the overall preterm birth rate. Clinical interventions before delivery that may improve outcomes include transfer of patient to a tertiary center, administration of antenatal corticosteroids, tocolytics, or antibiotics after premature rupture of membranes, assessment of fetal well-being with electronic fetal heart rate monitoring, and willingness to perform a cesarean delivery after the limit of viability is reached.

Wide international variation exists in the management and survival of extremely preterm births. Universally poor outcomes for babies at 22 weeks and for those weighing under 500 g suggest little impact of intervention and support the inclusion of birth weight along with gestational age in ethical decision-making guidelines.Development of interventions to reduce preterm birth are urgently needed for all countries, especially middle- and low-income countries where most preterm babies are born and the effect of feasible interventions on birth spacing and infection may be of higher impact.

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