



What is the ideal gestational age for twin delivery to minimize perinatal deaths?

Results of a large, robust meta-analysis of 32 studies (including 35,171 women with uncomplicated twin gestations) indicated that 37 weeks' gestation be considered ideal timing in uncomplicated dichorionic twin pregnancies, and not before 36 weeks for monochorionic twin pregnancies, to minimize perinatal deaths. Researchers examined the risks of stillbirth and neonatal death at weekly intervals (eg, pooled risk difference per 1,000 pregnancies for stillbirth and neonatal death at 37 0-6 weeks, 1.2; 95% confidence interval [CI], -1.3 to 3.6; $I^2 = 0\%$), as well as morbidity outcomes in preterm infants. Unclear factors in the meta-analysis data, however, including the accuracy of chorionicity determination and the lack of information on fetal surveillance at the study centers, among others, preclude recommending a change in current practice from society-supported guidelines, which indicate that **ideal delivery should fall within a gestational-age range, with delivery decisions within that range depending on numerous factors.**

Cheong-See F, Schuit E, Arroyo-Manzano D, et al; Global Obstetrics Network (GONet) Collaboration. Prospective risk of stillbirth and neonatal complications in twin pregnancies: systematic review and meta-analysis. BMJ. 2016;354:i4353. doi:10.1136/bmj.i4353.

EXPERT COMMENTARY

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Cheong-See and colleagues conducted a comprehensive review and analysis of 32 studies of uncomplicated dichorionic and monochorionic twin pregnancies to determine the risks of stillbirth and neonatal complications by gestational age.

Details of the study

The authors searched major databases for studies on twin pregnancies that reported rates of stillbirth as well as neonatal outcomes (neonatal mortality was defined as death up to 28 days after delivery). A total of

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FAST TRACK

This large systematic review offers comprehensive data on twin pregnancy stillbirths and neonatal outcomes, but this strength must be weighed against the study's many limitations



32 studies were included in the analysis, with 29,685 dichorionic and 5,486 monochorionic pregnancies in 35,171 women. The authors estimated the gestational-age specific differences in risk for stillbirths and neonatal deaths after 34 weeks' gestation.

In dichorionic pregnancies, the prospective weekly pooled risk of stillbirths from expectant management and the risk of neonatal mortality from delivery were balanced at 37 weeks of gestation (risk difference, 1.2/1,000, 95% CI, -1.3 to 3.6; $I^2 = 0\%$). In monochorionic pregnancies, after 36 weeks there was a trend toward an increase in stillbirths compared with neonatal deaths, with a pooled risk difference of 2.5/1,000 (95% CI, -12.4 to 17.4; $I^2 = 0\%$). Neonatal morbidity rates were consistently reduced with increasing gestational age in both monochorionic and dichorionic pregnancies.

The researchers' recommendations

The authors recommended that dichorionic pregnancies be delivered at 37 weeks and that the evidence for delivery of monochorionic twins prior to 36 weeks is lacking. While the analysis is comprehensive and well done, it cannot escape the limitations that afflict all systematic reviews and meta-analyses, and these limitations are well addressed by the authors. Several factors, however, warrant caution regarding the adoption of the authors' recommendations.

Cautions. First, determination of chorionicity may not have been accurate in all of the studies reviewed. Additionally, we have no data on how these pregnancies were managed with respect to antepartum fetal surveillance, ultrasound surveillance for growth and discordancy, and management of labor and delivery. There are no data on the quality of the ultrasound examinations being performed at each of the centers.

Also, the factors that may increase the risk of stillbirth are not necessarily the same factors that may influence the neonatal death rate, and this review moves between the use of these terms (stillbirth rate,

WHAT THIS EVIDENCE MEANS FOR PRACTICE

While this comprehensive and very well conducted review and meta-analysis highlights the complexity of balancing stillbirth risk against neonatal mortality risk, the limitations of the study are too substantial to allow for any change in current practice. My recommendation for the timing of twin delivery is to adhere to the guidelines that are currently supported by both the Society for Maternal-Fetal Medicine and the American College of Obstetricians and Gynecologists.¹ These guidelines recommend that, for dichorionic-diamniotic twin pregnancy, the general timing of delivery be at early term, with suggested specific timing at 38 0/7 to 38 6/7 weeks of gestation. For monochorionic-diamniotic twin pregnancy, the general timing of delivery may be at late preterm/early term, with suggested specific timing at 34 0/7 to 37 6/7 weeks of gestation. Delivery decisions made within these date ranges depend on numerous factors discussed in the guidelines, and timing of delivery should be individualized.¹

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neonatal mortality rate, and perinatal mortality rate) fairly frequently. For example, an improperly managed labor, an unanticipated difficult breech extraction, or the need for emergent cesarean delivery of the second twin might contribute to the neonatal death rate irrespective of gestational age at delivery. The authors acknowledge that outcomes may have been influenced by differences in obstetric and neonatal management of twin pregnancies that were observed between centers. Another concern is the authors' use of unpublished aggregate and individual patient data. 🚫

Reference

1. American College of Obstetricians and Gynecologists Committee on Obstetric Practice, Society for Maternal-Fetal Medicine. ACOG Committee Opinion No. 560. Medically indicated late-preterm and early-term deliveries. *Obstet Gynecol.* 2013;121(4):908-910. Reaffirmed 2015.

FAST TRACK

The timing of twin delivery should continue to be based on society-supported guidelines, with delivery decisions individualized