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Optimal timing of twin deliveries

Issue 18: 28 Aug 2006

Source:

American Journal of Obstetrics & Gynecology 2006; **195**: 172-7



The optimal date of delivery of twin pregnancies is likely to be 38 or 39 weeks' gestation, as this is when morbidity and mortality rates tend to be lowest, according to the findings of a new study.

Specialists from the University of Ottawa, Canada, conducted the study to identify the most favorable gestational age (week) for the delivery of twin pregnancies, in pregnancies of at least 37 weeks' gestation.

In the introduction to their paper, in the *American Journal of Obstetrics & Gynecology*, they write: "From the literature, there is controversy around the optimum date of delivery for those twins who reach term: the optimum date has been defined variably as either 37 or 38 weeks of gestation."

To investigate further, they analyzed national data on 60,443 deliveries of twin pairs at 37 or more weeks' gestation. The pairs were delivered between 1995 and 1997.

The researchers stratified the deliveries into four groups based on gestational age at delivery: 37 weeks, 38 weeks, 39 weeks, and 40 or more weeks.

Mortality:

For both of the twins in each pair, there was a significantly increased incidence of total neonatal and noncongenital anomaly related deaths in those born at 40 weeks or more of gestation, compared with the reference group of twins born at 37 weeks. The relative risk of neonatal death was 3.47 for the first twin delivered in each pair, and 2.52 for the second twin.

Morbidity:

For both twins, there was a significantly increased risk of neonatal morbidity, as indicated by the Apgar score, in those born at 40 weeks or more of gestation, compared with the reference group. The relative risk of having a low Apgar score (below 3) at 5 minutes was 1.88 for the first twin, and 1.74 for the second twin.

The association between gestational age at delivery and the requirement for assisted ventilation was different for the different twins in each pair. First twins born at 38 or 39 weeks' gestation (but not those born at 40 or more weeks' gestation) had a significantly decreased risk of requiring assisted ventilation, compared with those born at 37 weeks' gestation. The odds ratios were 0.86 at 38 weeks and 0.83 at 39 weeks.

In contrast, second twins born at 39 or 40 or more weeks' gestation (but not those born at 38 weeks' gestation) had a significantly decreased risk of assisted ventilation, compared with the reference group. The odds ratios were 0.83 and 0.81 respectively.

Concluding, the researchers state: "This study suggest that the optimal date of delivery for twins should be <40 weeks of gestation, and we did not identify compelling evidence (such as decreased risk of morbidity) for being delivered at <38 weeks of gestation."

They add that randomized trials are necessary, and note that one such trial (the **Twins: Timing of Birth at Term trial**) is already underway in Australia.

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