Vaginal delivery of dichorionic diamniotic twins beyond 32 weeks gestation is associated with poorer neonatal outcomes

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The aim of this study was to assess the impact of mode of delivery on neonatal outcomes in dichorionic diamniotic (DCDA) twins delivered after 32 weeks at a major maternity centre in Australia.

Methods

This was a retrospective study of DCDA twins delivered at the Mater Mothers’ Hospital in Brisbane, Australia, from January 1997 to November 2013. Data were collected from the hospital’s maternity, maternal fetal medicine and neonatal databases. Exclusion criteria included non-DCDA twins, higher order multiples, known single fetal demise at any gestation or confirmed aneuploidy. Perinatal outcome data included APGAR scores <7 at 1 and 5 minutes, need for neonatal resuscitation, neonatal intensive care unit (NICU) admission, and death prior to discharge.

Results

A total of 1261 women delivered 2522 twin babies during the study period, of which 2090 (82.9%) were delivered at >32 weeks gestation. Four hundred and seventeen (39.9%) women delivered both twins via elective caesarean section, 318 (30.4%) via emergency caesarean section, and only 155 (14.8%) women successfully delivered both babies via normal vaginal delivery (NVD). The remaining 155 (14.8%) women required an intervention (instrumental or emergency caesarean section), for at least one of the twins. A composite outcome score, calculated from APGAR scores, need for neonatal resuscitation, NICU admission and neonatal death, also demonstrated a similar trend with lower scores, indicating better outcomes, in the NVD (1.23) and elective caesarean groups (1.52), compared to the babies delivered via instrumental (1.90) or emergency caesarean sections (1.97) (p<0.001).

Conclusions

The results presented in this retrospective study from a single tertiary centre demonstrate that overall neonatal outcomes for DCDA twins delivered via emergency caesarean section or instrumental vaginal delivery are worse than those delivered by elective caesarean section or uncomplicated normal vaginal delivery. Our results also demonstrate that only 1:7 women (14.8%) have uncomplicated vaginal delivery of both twins. Women should be advised of local intrapartum outcomes for DCDA twins as this may likely influence their choice of mode of delivery.