



Comparison of perinatal outcomes of spontaneous versus assisted conceived twin pregnancies with time trend

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Objective

The aim of this study was to compare the pregnancy outcomes of spontaneous versus assisted twin pregnancy with time trend.

Methods

This was a retrospective cohort study conducted between 1995 to 2016, which included 1,939 twin pregnancies. Eligible subjects were divided into two groups by 11-year period (Period 1: 1995-2005, Period 2: 2006-2016). Comparison was done for maternal characteristics, obstetrical and neonatal outcomes between spontaneous and assisted conception groups.

Results

Between Period 2 and 2 there was a significant increase in maternal age, nulliparity, and twins conceived by assisted reproductive techniques. During Period 1, there was insignificant difference in the obstetrical and neonatal outcomes between the two groups. During Period 2, the rates of preterm birth (63.0% vs. 55.9%, $p=0.020$), small for gestational age (16.4% vs. 10.9%, $p<0.001$) and congenital fetal anomaly (4.7% vs. 2.8%, $p=0.023$) were higher in the spontaneous conception group in the period 2. However, the neonatal morbidities were not significantly different between the two groups except for a higher rate of neonatal intensive care unit admission (43.1% vs. 37.5%, $p=0.010$) in the spontaneous group.

Conclusion

Increase of maternal age and the number of dichorionic twins over the 2 periods were associated with higher risk of preterm birth, small for gestational age, and congenital fetal anomaly in the spontaneous conception group. However, overall neonatal outcomes were non significantly different between the two groups during both time periods. This may be due to advanced obstetrical and neonatal care.