

Delayed Parenthood and the Risk of Cesarean Delivery

- Is Paternal Age an Independent Risk Factor?

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Abstract

BACKGROUND: Between 1995 and 2001, the average cesarean section rates in Taiwan were as high as 33.34 percent. This study set out to determine the independent effects of paternal age on the likelihood of cesarean delivery among a sample of Taiwanese women. **METHODS:** Logistic regressions were used to analyze 310,574 singleton deliveries by nulliparous women in Taiwan between 1999 and 2001, linking data abstracted from birth certificates and from the National Health Insurance claims database. After controlling for socioeconomic, pregnancy, and obstetric complications, as well as institutional factors, we investigated both maternal and paternal ages simultaneously, using the single category variable "parental age" to determine the differential age effects on the risk of cesarean delivery. **RESULTS:** Taking 20- to 29-year-old couples as the reference group, we observed that the relative risks of cesarean delivery become progressively higher with advancing age of the mother. At the same time, within each maternal group, positive and significant variations in cesarean rates occurred for different paternal age groups. The respective increases in the relative risks of cesarean delivery for men aged 20-29, 30-34, 35-39, and 40 years or more, in conjunction with women aged 20-29, 30-34 and 35 or over, are 34 percent from 1.00 to 1.34, 18 percent from 1.51 to 1.69, and 16 percent from 2.03 to 2.19. Other confounding variables are also taken into account. **CONCLUSIONS:** Irrespective of maternal age, advancing paternal age also appears to be an additional independent factor that has a strong association with the increase in cesarean section rates.