Annual Trend in Zygotic Twinning Rates and their Association with Maternal Age in Japan, 1999-2008

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Abstract

Objective: We aimed to determine the recent trend in monozygotic (MZ) and dizygotic (DZ) twinning rates and their association with maternal age (MA).

Study design: The MZ and DZ twinning rates were estimated using Japanese vital statistics from 1999 to 2008.

Results: The DZ twinning rate per 1000 deliveries increased from 5.10 in 1999 to 7.66 in 2005 and decreased thereafter (5.98 in 2008). The MZ twinning rate increased significantly with an increase in MA in 2002, 2003, 2006, and 2008. Both the DZ and overall twinning rates increased significantly with an increase in MA in each year. From 1960-1967 to 1999-2008, the DZ twinning rates increased 280% for MA 30-34 years, 290% for MA 35-39, and 370% for MA 40 and over. On the contrary, the MZ twinning rates remained nearly constant with MA for both periods.

Conclusion: The DZ twinning rate increased till 2005 and decreased thereafter. The rate in 2005 (7.66) was 339% higher than that between 1955 and 1967 (2.26) whereas the MZ twinning rate remained constant before and after the introduction of reproductive technology.