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## Spontaneous Abortions and Twinning

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**Abstract.** The relation between spontaneous abortions and twinning was studied in the years 1980-1981 in 22 towns of the South Moravian Region, Czechoslovakia. Each town has more than 10,000 inhabitants and less than 750 births per year. The number of spontaneous abortions and the number of twin births were evaluated separately for each town and for a time unit of three months. The comparison indicated that the group with a higher number of spontaneous abortions also had a lower number of twin births. The relation between spontaneous abortions and twinning is discussed.

**Key words:** Abortion, Twins, Vanishing twin

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The relation between spontaneous abortions and twinning was studied in the years 1980-1981 in 22 towns of the South Moravian Region, Czechoslovakia. Each town has more than 10,000 inhabitants and less than 750 births per year, so that a reasonably homogeneous group could be formed. The number of spontaneous abortions and the number of twin births were evaluated separately for each town and a time unit of three months (this being the interval adopted by the available statistics). Because the abortion law in Czechoslovakia is liberal enough, we can suppose that no induced abortions are included. Since estimates of the incidence of spontaneous abortions must be based upon recognizable cases, the true incidence of this event is difficult to assess. Therefore, only abortions observed at the clinical level could be evaluated. The twin births include live and stillbirths. Zygosity was not determined for technical and economic reasons. One unit of one town and three months, considered a random deviation (23 spontaneous abortions and 4 pairs of twins), was omitted. In no other unit did the number of spontaneous abortions exceed 20.

The results are summarized in the Table. It can be seen that in the group with a higher number of spontaneous abortions (11-20 per unit), the number of twin births was

TABLE - Spontaneous Abortions and Twinning

Number of spontaneous abortions in one town in three months	Total number of spontaneous abortions	Total number of twin births	Total
0-10	420	38	458
11-20	679	35	714
Total	1099	73	1172

significantly reduced. Although zygosity is not available, this finding supports Lazar's suggestion of a negative effect of spontaneous abortion on dizygotic twinning [5].

Much work was devoted to the study of individual proneness to spontaneous abortion and twinning [1, 2], but no general trends have been identified. Epidemiological evidence shows that at least some of the exogenous factors increasing spontaneous abortion tend to decrease the ability to give birth to twins. The most likely explanation is the existence of a "vanishing twin" [4]. Higher spontaneous abortion rate leads more frequently to the loss of one twin only than to that of the whole pair, thus making the twinning rate seem lower. This hypothesis is in full agreement with Hewitt and Stewart's suggestion that the abortion risks are greater for one than for both twins and that the surviving twin is often mistaken for a singleton [3]. The incidence of twinning may thus be higher than generally believed.

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