The relationship between parity and outcome of twin gestation

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Objective: To examine the relationship between parity, gestational age at delivery and birth weight in twin pregnancies.

Materials and methods: A retrospective analysis of all twin pregnancies delivered at Northwestern Memorial Hospital between 1991 and 1995 was conducted using the department’s obstetric database. Pregnancies delivered prior to 20 weeks gestation were excluded. Data collected included: parity, gestational age at delivery and birth weights of each twin. Birth weight was summed to give the total birth weight; parity was stratified as nulliparous, primiparous, and multiparous. Gestional age at delivery was stratified for two different analyses as either delivering before or after 32 and 34 weeks, respectively. Statistical analysis was performed using the Student’s t-test for differences in gestational age at delivery and total birth weight for nulliparous and parous women; ANOVA for the association between gestational age and total birth weight for nulliparous, primiparous and multiparous women; and the $\chi^2$ test for associations between prematurity <32 and 34 weeks and parity status. $p = 0.05$ was considered significant.

Results: During this five year period there were 610 twin pregnancies: 334 women were nulliparous and 276 were parous. There was no significant difference between the mean gestational age at delivery for nulliparous women (35.2 ± 3.9 weeks) and parous women (35.0 ± 4.2 weeks) nor was there a significant difference between the mean total birth weight for nulliparous women (4748.6 ± 1421 grams) and parous women (4650.8 ± 1368 grams). No significant association could be found between a woman’s parity and gestational age at delivery or total birth weight. No relationship was found between a women’s parity and delivery prior to 32 or 34 weeks’ gestation.
Conclusion: The mean gestational age at delivery in this population of twin pregnancies was two weeks earlier than the usually cited gestational age of 37 weeks. In this population, no relationship was found between a woman's parity and her risk for preterm delivery of a twin pregnancy. Nulliparity alone does not increase the risk of twin delivery prior to 32 or 34 weeks gestation.

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Twin and multiple pregnancies arising from assisted procreation in Belgium

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In recent years the frequency of twin pregnancy has been rising in several industrialized countries. This rise is partly due to increasing maternal age but is also attributable to infertility treatment. The use of ovulatory drugs in the treatment of anovulation and the replacement of several embryos in IVF practice share about equals parts of responsibility in this phenomenon. The BELRAP association regroups 17 Belgian centers of assisted procreation which produce national statistics in this field since 1989. In Belgium, the percentage of twins among pregnancies arising from IVF has increased from 27 to 35% between years 1990 and 1992 and was maintained at 30% in 1993. The incidence of triplets had dropped from 5 to 1.5% during the same interval. Along the years, Belgian centers have generally tended to reduce the number of embryos replaced per trial, from 3 (or more) to 2. However, 45% of trials still entail the replacement of 3 embryos. It is probable that the observed fall in the frequency of triples was not only due to this decrease in the number of transferred embryos but also to manual reduction of multiple pregnancies which several centers are offering to their patients. Efforts should be made to reduce also the incidence of twins in IVF practice since like in the general population, their prematurity and mortality rates are much higher than among IVF singletons.

Belgian Register of Assisted Procreation – BELRAP

Twin to twin transfusion syndrome – some clinical observations

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The aim of the study was to estimate the incidence of twin to twin transfusion syndrome (TTTS) in our clinical practice and to define the predominant complications of this pathology responsible for mortality and morbidity in the neonatal period. The following diagnostic criteria were established for the purpose of analysis:
1) difference between the twins' bodyweight reaching 20% or beyond and difference between the volumes of amniotic fluid (sonographic criteria);
2) difference in haematocrits and levels of haemoglobin (haematologic criteria);
3) hypervolaemia and cardiomyopathy in the recipient fetus, cardiac insufficiency, including fetal hydrops (cardiologic criteria);
4) presence of vascular anastomoses in the afterbirth.
Materials: Within the years 1992-95, 193 couples of twins were born. 67 twin couples were hospitalised in the NICU. TTTS was diagnosed in 5 cases.