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[Congenital malformations in children born after IVF]

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Abstract: BACKGROUND: Major congenital malformations are a leading cause of perinatal morbidity and mortality. Congenital malformations are caused by three factors: genetic, environmental or multifactorial, all of which are present in the context of artificial reproductive techniques. FINDINGS: In 1999 Bergh et al. conducted a retrospective study, which included all the children born following IVF treatment in Sweden. The relative risk found was RR = 1.39 [95% CI 1.25-1.54] and there was no stratification for maternal age and parity. In 2002 Hansen et al. conducted a well-established retrospective study in Western Australia. When only term singletons were included in the study, the OR found was OR = 2.1 [1.4-3.2] in the IVF group and OR = 2.2 [1.2-4] in the ICSI group. Results were stratified for maternal age, parity and offspring sex. A meta-analysis of 19 studies found a relative risk of 1.29 for major malformations among IVF pregnancies. DISCUSSION: Explanations for the increased risk of fetal malformations could be divided into three categories: first, the characteristics of the infertile population which include many risk factors: older age, lower parity, chronic diseases and infertility itself. Second, the techniques used to treat infertility are not physiologic. Third, the characteristics of the pregnancy achieved: the incidence of high-order pregnancies is much greater and this fact exposes the offspring to other risk factors such as preterm birth and low birth weight. CONCLUSIONS: Major advances in reproductive techniques offered hope for many couples, but they were also the reason for much concern regarding the outcome of the awaited offspring. The recent studies seem to justify some of those doubts.

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