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Recurrent Spontaneous Abortion: An Overview of Genetic Backgrounds and Impact of Male Factors: A Review

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ABSTRACT Genetic factors in the form of maternal or fetal single gene disorders, chromosomal abnormalities, inherited thrombophilia and other genes involved are the main causes of recurrent abortion (RA). The risk of miscarriage is highest among couples where the woman is >35 years of age and the man >40 years of age. In about 50–70% of miscarriage, a chromosome abnormality is identified in the products of conception, this chromosomal abnormality derived from one parent or the recurrence of a numerical abnormality. In about 3-5% of couples with two or three spontaneous pregnancy losses, a balanced chromosome rearrangement was found in one member of the couple. Also man's factors have an important role in RA since the man gamete contributes one-half of the genomic content to the embryo. Moreover the paternally expressed genes may have an impact on implantation, placental proliferation, and placenta quality. So any situation which leads damage of sperms DNA (e.g. varicocele) will be associated with a reduction in some fertility indices.