FETAL REDUCTION IN MULTIPLE PREGNANCY FOLLOWING IVF: CLINICAL, ETHICAL, AND COUNSELLING PERSPECTIVES

Prof. Kushagradhi Ghosh[1,2,3]
1: Institute of Fetal Medicine (IFM Kolkata)
2: Omega Clinic
3: Bhagirathi Neotia Centre

The global expansion of assisted reproductive technologies (ART), particularly in vitro fertilisation (IVF), has been accompanied by a rise in multiple gestations. Although improvements in laboratory culture, blastocyst transfer, and elective single-embryo transfer policies have reduced high-order multiples, twin and triplet pregnancies continue to occur at rates significantly higher than in spontaneous conception. These pregnancies are associated with increased risks of preterm birth, fetal growth restriction, congenital anomalies, hypertensive disorders, gestational diabetes, and perinatal morbidity and mortality. For the mother, the risks of operative delivery, haemorrhage, and long-term complications are also disproportionately higher. Against this backdrop, fetal reduction has emerged as an important clinical option to improve perinatal outcomes when confronted with high-order multiples or medically complex scenarios.

Fetal reduction, performed typically between 11–14 weeks, aims to decrease the number of fetuses to an optimized and safer number—most often from triplets to twins or from quadruplets to a singleton or twin gestation. Advances in first-trimester ultrasound, chorionicity determination, and genetic screening now allow more accurate assessment of individualized fetal risk, enabling selective reduction when one fetus shows significant structural abnormalities, aneuploidy, or discordant growth. While overall evidence suggests that reduction improves gestational duration, neonatal survival, and long-term morbidity, outcomes can vary with chorionicity, procedural timing, technique (potassium chloride injection vs. cord disruption in monochorionic gestations), and operator expertise.

Ethical considerations remain central to decision-making. Couples undergoing IVF often have a prolonged history of infertility, emotional investment, and financial strain, making the prospect of reducing a “precious pregnancy” psychologically challenging. Sensitive, non-directive counseling is essential and must incorporate maternal risks, fetal prognosis, procedural safety, and the ethical landscape. Multidisciplinary involvement—including fetal medicine specialists, obstetricians, genetic counselors, and psychological support providers—ensures balanced, compassionate guidance.

Looking ahead, the ultimate goal is prevention of high-order multiples through responsible IVF practices, including strict embryo-transfer limits, promotion of elective single-embryo transfer, and enhanced embryo selection strategies. Yet, until such practices are universally adopted, fetal reduction will continue to have an important, albeit ethically complex, role in optimizing maternal and neonatal outcomes in IVF-related multiple pregnancies.

ISBN Number : 978-81-995582-9-8 Crossref