

## Standardized Infertility Treatments not only Ensure Maternal-Fetal Health but also Provide Higher Success Rates

In spite of sophisticated development in assisted reproductive techniques (ART) in the past three decades from birth of the first IVF baby, Louise Brown, in 1978, and increase in the success rate of infertility treatment up to 50%–60% in well-designed centers using standard protocols and intensive total quality management, these treatments face a few difficulties including multiple pregnancy and ovarian hyperstimulation syndrome (OHSS) that recently overshadowed the application of these methods. The rate of twin pregnancy is about 1% worldwide, however infertility treatment thorough ART increases its frequency up to 30% depending on the number and quality of transferred embryos, maternal age, quality of endometrium preparation and prenatal care. Multiple pregnancies increase the risk of pregnancy loss, gestational hypertension including pre-eclampsia and eclampsia, gestational diabetes, severe bleeding, forceps delivery and other complications on the maternal side and the risks of prematurity and low birth weight that are accompanied by increased mortality and morbidity or permanent disabilities such as cerebral palsy and restriction of motor and intellectual abilities on the child side. Therefore, neonatal and infant mortality rates of twin to singleton pregnancies increase more than seven times (1).

Quality and number of transferred embryos are a key factor in determining the frequency of twin or high order multiple pregnancies. Most studies have shown that increased number of transferred embryos directly increases the rate of multiple pregnancies; however this has not been proportionate with the increase in success rate (2).

Consistently over time, infertile couples encounter a great deal of pressures from family, colleagues and community on one hand and high costs of repeating treatment cycles and gradual damage to their marital relationships on the other hand which eventually make them request transfer of higher numbers of embryos in each cycle. Infertile couples always wish to solve their infertility problem in the shortest possible length of time, while they may be less likely to think about the consequences of their request. Therefore, aside from resolving the infertility problem of infertile couples, one of the important roles of the treatment team is to provide a precise and complete consultation on the consequences and problems that they might face during and after of the treatment, especially multiple pregnancies.

The other party involved in multiple pregnancies following infertility treatments is the medical team including the gynecologist, infertility specialist and embryologist.

Obviously, some treatment teams looking to increase the success rate of their centers may make mistakes to increase the number of embryos based on the patient's will. This mistake often occurs in centers that success rate is counted as the chemical and clinical pregnancy and most of these physicians do not follow the prenatal care of the pregnant women. However, recently success rate of ART was defined as the success in all stages of treatment from diagnostic procedures to delivery of healthy baby(s) with least possible cost and complication and even the baby's future health (3).

At present, some countries permit the transfer of more embryos based on the patient's condition and quality of embryos. In most of these countries all the infertility treatment costs are paid by the patients with partial coverage from insurance companies. However, in some other countries such as the UK and Australia, the number of embryos that can be transferred is limited even in the most difficult and repeated IVF failure cases. Interestingly, in most of these countries insurance coverage for infertility treatment and other therapies is complete and most insurance companies strongly oppose the transfer of more embryos due to complications and costs of multiple pregnancies (4).

Iran is among the first group, and most IVF centers believe that physicians should have the right to determine the number of embryos they transfer for each patient, rather than absolutely following a protocol for all patients that does not take into account the justification of the patients' particular condition. Consequently, the rate of high order multiple pregnancies is high.

The seventh article of this issue entitled "Specialists' Attitude toward Appropriate Number of Transferable Embryos in Assisted Reproductive Technology in Iran" covers the infertility treatment doctors' views about the most appropriate number of transferred embryos. I hope this article and your comments and feedbacks will bring about change in treating physicians' views and those of the policy-makers about the meaning of success in infertility treatment, especially the number of transferable embryos. With careful consideration

and attention to the results of this study and the current situation of infertility treatment in the country, the need for more standardized protocols to maintain the health of the mother and the fetus and increase the success rate of these treatments is unequivocally clear.

### References

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*Mohammad Reza Sadeghi*  
*Editor-in-chief*

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