

## Advanced Reproductive Technologies and Postponement of Parenthood

Industrialization of developed and developing countries during recent and the end of the 20th century was accompanied with fundamental changes in habits and life style of communities. The change in family planning and childbirth is greatly emphasized due to its numerous effects on mothers, newborns, families and societies. Postponing parenthood is a very common aspect of revolution in family planning during past decades. Postponement of parenthood is generally related to socio-demographic reasons including tremendous tendency in higher levels of education, increased rate of women employment and imbalance of financial status to support a child immediately after the marriage.

Increased age of men and women results in a decrease in fecundity. There is no consensus on the description of reproductive age of women but the age of 35 is accepted as cutoff age. The reserve of ovary and quality of oocyte remnants decrease in women older than 35 years. In addition, the rate of other obstetric and gynecological diseases including gynecological cancers, endometriosis, myomas, endometrial polyps and other malignant diseases would increase in aging women. The same situation is predictable in aging of men. In addition to the increased risk of malignant diseases particularly testis cancer, sperm counts, sperm quality (especially chromatin integrity), sex hormones and sex drive decrease during aging of men and all of them lead to a decline in fecundity in older men (1).

Recently, most of young couples are wrongly informed that there is no problem to delay their pregnancy and parenthood to the age of 35 or above and it is worse that they are mistakenly advised that development in advanced reproductive technologies can help them for recovery of age-related consequences of infecundity. Therefore, in some European countries, about 5% of children are born following ART treatment. Application of IUI, IVF, ICSI and other advanced techniques can eliminate some failure related to male and female infertility but they cannot recover the age-related decrease in quality of sperm, oocyte and uterus. Couples should be aware that assisted reproduction technology (ART) cannot compensate for the age-related reduction in male and female fecundity (2).

Recent findings show that postponing pregnancy and childbearing potentially increases the prevalence of multiple pregnancies, spontaneous abortions, ectopic pregnancy, intrauterine growth restriction, intrauterine fetal death and stillbirths, diabetes and chronic hypertension, preterm labor, peripartum complications, maternal morbidity and mortality and genetic and congenital birth defects such as cerebral palsy, neurocognitive and psychiatric disorders (3).

Despite the use of donated oocytes and embryos for aged women after 40, the risk of gamete and embryo related complications such as genetic and congenital birth defects has been reduced somewhat, but these options are more expensive and are not available for all aged women and also raises some legal, psychological and social issues (1).

Therefore, it is necessary to inform policy makers, health care providers and community about the potential risks and complications related to postponing marriage, pregnancy and childbirth. Counseling and increasing the young couples' knowledge culminate in their awareness about reproductive aging and their lower chance of childbirth with their own biological gametes. Increased knowledge of the issue will help them to change their wrong assumption and thinking and there upon they make mindful decisions for starting their parenthood. In addition, more governmental and public support is necessary for young couples in order to motivate them for planning to have their childbirths at an earlier age.

### References

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