

Topic: Preimplantation Genetic Screening

FISRT PREGNANCY FOLLOWING IN VITRO FERTILIZATION COMBINED WITH
PRE-IMPLANTATION GENERIC SCREENING IN GEORGIA

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Introduction

Pre-implantation genetic screening is an IVF procedure designed to examine embryos for chromosomal abnormalities. An embryo biopsy is done either at day 3 or day 5. All 24 chromosomes are examined – the 22 non sex chromosomes plus two sex chromosomes (X&Y). Chromosomal abnormalities can result in aneuploidy, translocations or other chromosome alteration that may be clinically significant. PGS aims is to improve pregnancy rate and live birth rate by screening embryos for chromosomal abnormalities.

Methods

A couple with primary infertility. Attended at our clinic. Male partner was 58year old , female 52year old . Age of female partner was advanced so this patients needed egg donation and surrogacy program. Patient requested for PGS , because male age was advanced and they had successful donor cycles. Donor was 27 years old. 1650IU of FSH and 600IU HMG was used for ovarian stimulation with antagonist protocol. Semen parameters was normal.

Result

1500 IU hCG and 0.2mg/2ml GnRh agonist was administered, after thirty six hours oocyte collection was done. 18 cumulus-complex was retrieved. 12 oocytes were mature. Intracytoplame sperm injection was done on 17 oocytes . At day 1 15 - 2 PN had the signs of normal fertilization. There were cultured for five days. 6 embryos achieved blastocyst stage. Trophectoderm biopsy of 2 embryos was done on day 5 , 4 - embryos on day 6 . The obtained samples was sent was PGS and the embryos were vitrified. Result showed that 5 embryos were euploid and 1 embryo was aneuploid. 2 Embryos were thawed and transferred into the surrogate mother's womb. Positive hCG result was obtained 12 days after embryo transfer and twins' heart beat was detected at six week.

Conclusion

We report first pregnancy following IVF combined PGS using array Comparative Genomic Hybridization (array CGH) in Caucasus.