PREIMPLANTATION GENETIC DIAGNOSIS (PGD) AS BOTH A DIAGNOSTIC AND THERAPEUTIC TOOL IN ASSISTED REPRODUCTIVE TECHNOLOGY

Little known by people who have not undergone a Fertility medical treatment is that some of the embryos produced as part of the process are implanted in the would be mother. The remainder of these embryos are frozen for possible later use. How many to implant and which ones to implant is decided upon by a Reproductive Endocrinologist and his/her team of experts. The science of this selection process has taken a huge leap forward with the recent improvements in abilities to read the Human Genome.

Lawrence Werlin, MD, noted Fertility doctor in Irvine, CA is one of the nation's leaders in the application of a technique called Pre-Implantation Genetic Diagnosis (PGD) to the embryo selection process. In a PGD procedure, a Reproductive Endocrinologist is able to determine the genetic make up of an embryo to be implanted during an In Vitro Fertilization (IVF) procedure, and may ultimately have the effect of eliminating genetic disease and enhancing pregnancy results.

PGD enables Reproductive Endocrinologists to assess the chromosomal makeup of an embryo before implantation in the womb. This procedure is targeted to older women (over 38), women who have had two or more unsuccessful In Vitro Fertilization attempts, women with repeated miscarriage, and couples where the husband plays a major role in the couples infertility.

Our initial data indicates that 65% - 70% of the embryos tested in these women are chromosomally abnormal. Dr. Lawrence B. Werlin, Medical Director at Coastal Fertility Medical Center is using PGD specifically as a genetic-testing tool for revealing these abnormalities related to unsuccessful outcome. PGD allows us to transfer only normal embryos, which would maximize the chances of a successful outcome.

PGD also offers widespread potential for identifying such fatal diseases as Cystic Fibrosis, Sickle Cell Anemia, or Hemophilia. For parents with a genetic predisposition to chromosomal disease, it offers a greater likelihood for the possibility of delivering healthy babies. Up to this point Chorionic Villus Sampling and Amniocentesis have been used to document chromosomal abnormalities, but those events occur after the pregnancy has been achieved.

Down the road, PGD has the far-reaching capability of becoming a critical link between fertility and other areas of genetic research. Research has already begun using embryonic cells to replace damaged adult cells found in individuals with previously irreversible medical conditions such as Parkinson's disease.

In addition to eliminating genetic disease, the beauty of this, is that through this procedure, Dr. Werlin has the potential for saving these high-risk patients $$ Thousands of Dollars, by testing the embryos prior to implanting them via In Vitro Fertilization, thus sparing the expense and disappointment of repeated IVF failures.

PGD is by far one of the most exciting developments in the field of Reproductive Medicine.

Dr. Lawrence B. Werlin is a Reproductive Endocrinologist, Infertility Specialist. He is Medical Director of Coastal Fertility Medical Center, which has locations at 4900 Barranca Pkwy, Suite 103, Irvine, and 5 Journey, Suite 220, Aliso Viejo. You may phone him at (949) 726-0600, or visit us on the web at www.coastalfertility.com