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Children born after PGD as healthy as those born after conventional IVF treatment

Nice, France: Children born after embryo biopsy for preimplantation genetic diagnosis (PGD) do not show any more major malformations than those born after artificial reproduction technologies (ART) without PGD, a scientist will tell the annual conference of the European Society of Human Genetics today (Sunday June 17). Professor Ingeborg Liebaers, from the Research Centre for Reproductive Genetics, Free University of Brussels, Brussels, Belgium, will say that the results of her study of 583 children born after PGD was reassuring.

PGD is a new option for couples at risk of transmitting genetic diseases. Instead of carrying out a prenatal diagnosis followed by a termination of pregnancy, in vitro fertilisation (IVF) with intracytoplasmic sperm injection (where a sperm is injected directly into an egg) is performed, followed by genetic testing of the embryos. Only unaffected embryos are subsequently transferred to the womb.

“Because embryos are biopsied in PGD procedures, and this constitutes an additional manipulation of a delicate organism, we set out to study whether this had any effect on the health of children who were born as a result of this procedure”, says Professor Liebaers. The scientists first collected data on the pregnancies by giving questionnaires to patients on the day of the embryo transfer. Additional questionnaires were sent during pregnancy, at delivery, and later on to the patients, their gynaecologists, and paediatricians. Children were examined at 2 months and 2 years old.

“After embryo transfer, 563 children of the 583 were liveborn, 20 were stillborn, and 9 died neonatally. It seems that the perinatal death rate is higher, especially in multiple pregnancies, than in IVF and ICSI children. We need to further investigate these perinatal death rates,” says Professor Liebaers, “but we were encouraged to find that the major malformation rate was only 3.6%, or no higher than that which is found in children born after conventional IVF and ICSI.”

The average length of the pregnancies of singleton births was 38.8 weeks and the mean birthweight 3.268 kg, comparable to those of IVF and ICSI children, she says.

“The study is the first of a large series of PGD children from one centre”, Professor Liebaers will tell the conference, “and we will be carrying out further follow-up as these children grow older. But we feel that results to date are reassuring; it is good to know that a procedure that can offer patients hope of having a baby unaffected by serious disease is also safe in the longer-term.”

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