

Assisted reproduction boosts risk of deformity: study

June 13 2010

Children born after assisted reproduction face a significantly higher chance of having major birth defects, according to a study released Sunday.

Parents contemplating assisted reproductive technology (ART) should be informed that such treatments carry increased risks, the researchers warned.

The study, the largest of its kind to date, reviewed all the ART births in 33 registered clinics in France from 2003 to 2007, more than 15,000 children in all.

"We found a major congenital malformation in 4.24 percent of the children," said lead researcher Geraldine Viot, a clinical geneticist at the Port Royal maternity hospital in Paris.

The rate of such deformities for the general population is two to three percent.

"This higher rate was due in part to an excess of [heart disease](#) and malformations of the uro-genital system. This was much more common in boys," she said in a statement.

Among minor malformations, there was a five-fold increase in cases of angioma, the formation of benign tumours on or near the surface of the skin. These occurred twice as frequently in girls than boys.

"We estimate that in France some 200,000 children have been born through ART. A malformation rate of this magnitude is a public health issue," Viot said.

"It is important that all doctors -- and also politicians -- are informed about this," she added.

Parents of children born with malformations were not on average older than other parents in the ART group, so age did not seem to be a factor.

It was unclear to what extent the malformations might be due to genetic variants passed along by the parents, or to the assisted reproduction techniques themselves, the researchers said.

"The origins of the malformation are probably multiple," Viot said. "We need ... to put much more effort into trying to understand which of the procedures involved is implicated in the problem."

The most common techniques are in-vitro fertility (IVF) and a technique called intra cytoplasmic sperm injection (ICSI).

Women can also receive hormone therapy to restore or stimulate ovulation.

IVF consists of fertilising a woman's eggs outside the body and then placing them inside the womb, whereas in ICSI a single sperm is injected directly into an egg.

Earlier studies have shown that the most common cause of IVF failure is an abnormal number of chromosomes in the egg.

These so-called "gene imprinting" disorders could also play a role in the higher rate of malformations, Viot suggested.

"At a time when infertility is increasing and more and more couples need to use ART to conceive, it is vitally important that we find out as much as we can about what is causing [malformations](#) in these [children](#)," Viot said.

A Danish study released in February showed that women who undergo [IVF](#) treatment are four times more likely to have a stillbirth compared with those who conceive spontaneously or with a different fertility technique.

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