Is ICSI better than IVF? It depends

Research shows that IVF is just as effective as the ICSI procedure, where sperm is injected directly into an egg, when there is no male infertility factor. Cumulative live birth rates in Victoria were similar for IVF and ICSI in these circumstances.

In assisted reproductive technology (ART) there are two ways eggs can be fertilised: IVF (in-vitro-fertilisation) or ICSI (intracytoplasmic sperm injection). In IVF thousands of sperm are added to each egg in the hope that one will fertilise the egg. In ICSI the embryologist uses a microscope and very technically advanced equipment to select a single sperm which is injected into the egg. A few days after IVF and ICSI the embryologist checks to see if the eggs have fertilised and developed into embryos. If there are embryos, one (sometimes two) is placed in the uterus and any remaining embryos can be frozen for later use if the treatment is not successful.

When IVF was first developed in the 1980s it helped many couples who had previously been infertile have children. But IVF didn’t work for couples where the man had very poor sperm. That’s why, in the early 1990s, the ICSI procedure was developed. ICSI has been remarkably successful and helped couples with male factor infertility around the world have children.

Since then there has been an increasing trend to use ICSI for all causes of infertility. In Australia, around two thirds of ART treatments are ICSI. But, is ICSI better than IVF for couples who don’t have male factor infertility? That was the question researchers asked in a paper published today in the journal Human Reproduction.

The researchers looked at all women in Victoria who had their first ever stimulated ART treatment cycle between July 2009 and June 2014 and compared IVF and ICSI in terms of the chance of having a baby. In all, more than 13,000 women had their first treatment cycle in that time and between them they had more than 23,000 treatment cycles (including transfer of frozen embryos). The researchers found that, for couples who don’t have male factor infertility, ICSI doesn’t increase the chance of having a baby.

So the take-home message from this study is that couples with non-male factor infertility can save themselves the extra cost of having ICSI as it offers no advantage over IVF in terms of the live birth rate.

Source:
