

Daily Herald

Big Picture . Local Focus

Procedure offers hope to men with low sperm count

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ICSI is here.

That may not mean much to you, unless you are a man with an extremely low sperm count who wants to be a father.

Then ICSI — intra-cytoplasmic sperm injection — could mean the difference between having to use donor sperm and having your own biological child.

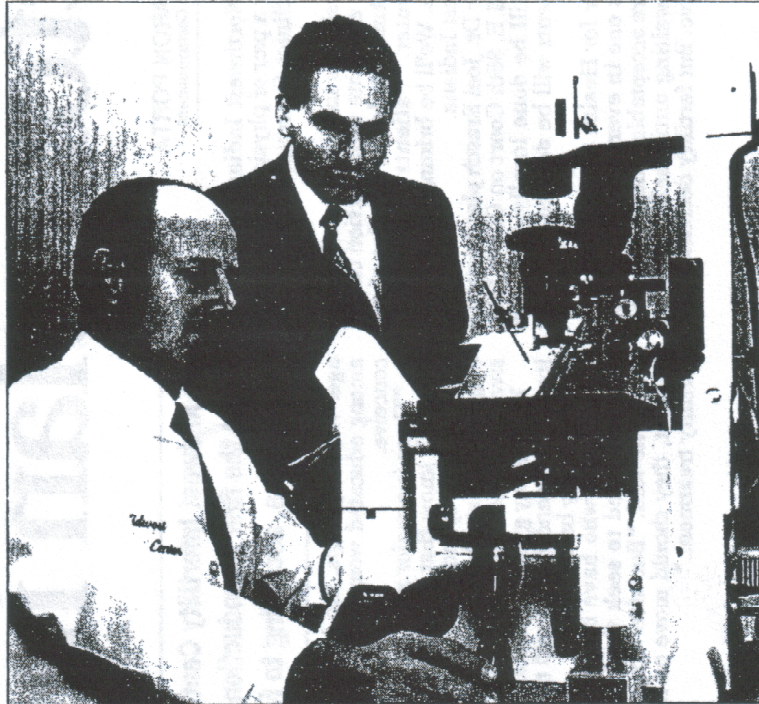
"Now we can take a smaller and finer glass tube — one-fifth the width of a human hair — and use it to actually inject a single sperm into an egg," said Dr. Amos E. Madanes, director and a board certified reproductive endocrinologist with the Midwest Infertility Center in Downers Grove, the first facility in DuPage County and possibly statewide to set up an ICSI lab.

"All of the assisted reproductive technologies needed hundreds of thousands of sperms to succeed and they all rely on the sperm needing to interact with the egg," he explained. "The reason this is such a big leap is because we're no longer dependent on the ability of the sperm to actually penetrate and fertilize the egg."

Men with very severe male factor (an extremely low sperm count) or sperm that are immobile or misshapen will no longer need donor sperm, Madanes said.

Obviously, said Dr. Joel G. Brasch, the clinic's reproductive endocrinologist and new associate, existing technologies can still work for many (see related story).

"We're talking about the patients who failed the system even with these advanced technologies. They now have hope for their own bio-



Dr. Amos Madanes, left, and Dr. Joel Brasch are working on a new technique dubbed "intra-cytoplasmic sperm injection" at the Midwest Infertility Center.

Daily Herald photo by Bev Horne

logical children.

As recently as four months ago they would have had to use donor sperm or adopt."

In October of last year, Belgian infertility experts revealed their excellent success rate with ICSI at the 1993 American Fertility Society meeting in Montreal, Canada.

Since ICSI is the only infertility treatment where a single sperm can achieve fertilization, in contrast to the multiple sperms required for fertilization by other methods, it should prove helpful even to men



who have been told they have no sperm, because, occasionally, there will be sperm present, said Dr. Brasch.

"ICSI is such a profound breakthrough because, today, with ICSI, all we need is one sperm," he added.

(Just for reference, an average sperm count has 100 million sperm per ejaculation.)

The latest technologies demanded at least 150,000 sperm to draw from. With ICSI, less than 500 sperm is workable.)

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Dr. Joel Brasch

sperm were essentially infertile and should adopt," said Dr. Brasch. "During my residency, men with one (million) and two million sperm were undergoing in vitro fertilization successfully.

"Now, with ICSI, we have essentially broken the sound barrier. Even men who were once called azoospermic (completely infertile) can have their own biological child because all we need is a single sperm which can be found in many of those previously considered azoospermic."

Of course, while success rates have equaled those of IVF, that is, about 50 percent, there still is a good chance the procedure will fail.

"It's not successful 100 percent of the time," acknowledged Dr. Madanes. "No matter how accurate and careful we are, we still probably damage some eggs. And not every fertilized egg makes a baby."

"The final sticking point is implantation," said Dr. Brasch. "It's the final frontier of reproductive medicine."

Added Madanes: "We can put five perfectly healthy embryos into two seemingly perfectly healthy women, and one will give birth to triplets and the other will not get pregnant. Implantation is truly the last black box."

"But as far as getting sperm and egg to interact, we have now made major strides."

And while there have been 91 ICSI babies born worldwide, none are in the United States.

"All of the major centers are in a flurry to get it moving," said Madanes. "Everybody wants to have the first ICSI baby."

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—Dr. Joel Brasch