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Can Just Taking a Picture Help to Treat Infertility?

An imaging technique to diagnose reasons for childlessness has a surprisingly happy result

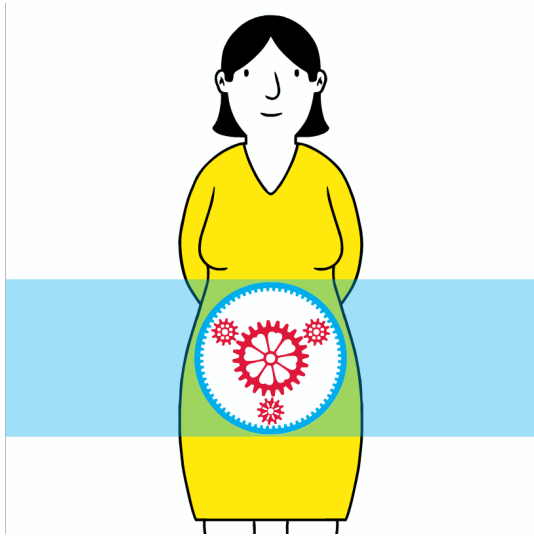


ILLUSTRATION: TOMASZ WALENTA

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In medical school, some of the worst emotional distress I saw resulted from failed fertility treatments. Through all of the pain and loss I witnessed in hospitals, I can still remember the face of one woman weeping as she yet again faced the prospect of childlessness. In a 1985 study of 200 couples whose fertility treatment ended in failure, half the women and 15% of the men called it the worst experience of their lives.

That's why my eye was drawn to a new study in the *New England Journal of Medicine* finding that hysterosalpingography cured some cases of infertility. *Hystero* refers to the uterus. *Salpingo*, I knew, relates to the fallopian tubes that funnel eggs to the uterus. *Ography* relates to imaging—but how could taking a picture of reproductive organs cure anything?

Doctors use hysterosalpingography to see if there are blockages that could be causing fertility problems. Sexually transmitted infections, especially gonorrhea and chlamydia, can sometimes go unnoticed and untreated, and the resulting inflammation or scarring can block the fallopian tubes. (These aren't the only causes of infertility, of course. Around a third of cases are due to male problems, a third to female issues, including blockages, 10% to 20% to both partners, and the rest to unknown causes.)

To look at blockages, technicians have to introduce a teaspoon or two of a dye that's opaque to X-rays. How that material is introduced, it turns out, is the key to the procedure's effect on childlessness.

The new study, published in May, focused on couples visiting 27 hospitals in the Netherlands. The researchers excluded couples in which men had issues like low sperm count or in which women had hormonal problems, ovary disease or major tube blockages that could prevent pregnancy. In the end, 1,119 participants trying to have children met the researchers' criteria, with the women all receiving hysterosalpingography.

Smaller studies had given the scientists an idea of what to do next. They randomly chose half of the women to get the X-ray-opaque dye dissolved in oil, while the other half got the dye in water. Hence the experiment's nickname (all big studies have them): "The H2Oil Trial."

After the imaging procedure, the couples received various recommendations. For about 58%, doctors just suggested months of "watchful waiting" as the couples tried to have a child. For the rest, the researchers intervened with artificial insemination or other procedures. In each group, the median age, 33, and age ranges were almost identical.

In an average of three months, whether treated or not, about 40% of the women receiving the oil-based dye material became pregnant, while only 29% of the women who got the water-based dye material conceived.

Hysterosalpingography is exactly a century old this year. Luckily, some astute doctors guessed that the method of taking a picture was having an unintended fertility effect, and now research has backed this up. Such serendipity in medical progress is neatly captured by a saying of the great French biologist Louis Pasteur about the need to be ready to see the unexpected: "In the fields of observation, chance only favors the prepared mind."

The realization that supposedly inert oil could help to fulfill some couples' dreams has built slowly. No one knows exactly how it works. Probably, the liquid flushes out some unseen debris, and previous studies suggested that oil for some reason does it better than water.

A lot of the women in the study would eventually have become pregnant, though not so many so quickly. Oil and water don't mix—but in this case they have collaborated in research that may spare many couples some very distressing news.