Fertility after ectopic pregnancy: Study finds reassuring evidence on different treatments
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The first randomised trial to compare treatments for ectopic pregnancies has found no significant differences in subsequent fertility between medical treatment and conservative surgery on one hand, and conservative or radical surgery on the other.

The study, which is published online today (Wednesday) in Europe's leading reproductive medicine journal Human Reproduction, compared three ways of treating an ectopic pregnancy: medically by methotrexate injection to interrupt pregnancy in the Fallopian tube; conservative surgery, which preserves the Fallopian tube (known as salpingostomy); and radical surgery, which removes the Fallopian tube (known as salpingectomy).

The French researchers found that there was no significant difference in fertility two years later between medical treatment and conservative surgery for ectopic pregnancies that were suitable for being treated this way, or between conservative and radical surgery for ectopic pregnancies that required surgical intervention. (They did not compare subsequent fertility rates between medical treatment and radical surgery, as some women would definitely have to be treated by surgery).

Between 2005-2009, researchers from 17 centres in France who were part of the "Groupe de recherche en gynécologie et obstétrique" (research group in gynaecology and obstetrics) randomised a total of 406 women to one of two arms: 1) those with less active ectopic pregnancies, judged by factors such as risk of the fallopian tube rupturing, how long it has been since the last menstruation, hormone levels, fluid in the peritoneal cavity, and who lived close enough to the hospital; and 2) those with more active ectopic pregnancies, where medical treatment is considered impracticable due to factors such as the fallopian tube rupturing or likely to rupture, and greater risk as indicated by the factors considered in the first arm of the study.

A total of 207 women in the first arm were randomised to either medical treatment or conservative surgery, while 199 were randomised to conservative or radical surgery in the second arm.

After two years the rates of spontaneous pregnancies in the uterus (intrauterine pregnancy) were 67% after medical treatment and 71% after conservative surgery in the first arm. The rates in the second arm were 70% after conservative surgery and 64% after radical surgery. The differences between the rates in each arm of the trial were not statistically significant.

Dr Perrine Capmas, a gynaecology surgeon and obstetrician at the Service de Gynécologie et Obstétrique, Hôpital Bicêtre, University Paris Sud, Paris, France, said: "This is the first randomised study to be able to compare fertility after the three treatments for ectopic pregnancies. We found that two years after treatment, there was no significant difference in fertility among the women who received medical treatment or conservative surgery in the first arm of the study, or women who received conservative or radical surgery in the second arm."

In their paper Dr Capmas and her co-authors write: "Our results suggest the following clinical recommendations for management:

- In less active EP [ectopic pregnancy], others parameters such as indication of each treatment and their own therapeutic effectiveness had to be taken into account. Medical treatment should be preferred in less-active ectopic pregnancies when possible, to take into account women's preferences … and also because it entails fewer anaesthesia- and surgery-related risks. However, given the absence of any difference for subsequent fertility, surgical treatment should be preferred for women
whose compliance with immediate follow-up may be doubtful.

- Once surgery is necessary, in more active ectopic pregnancies, the non-significant (and quantitatively small) difference in subsequent fertility should lead to a reconsideration of the balance between considerations of initial recovery and those of fertility preservation. Physicians should appropriately inform women on these two points."

Dr Capmas added: "This means that we are able to give better advice to women when they are being treated for an ectopic pregnancy. If a woman has an active ectopic pregnancy for which surgery is the only treatment possible, then we can tell them that even if we try conservative surgery first, there is a risk they will need more radical surgery. However, we can tell them that subsequent fertility seems to be similar after each treatment.

"For less active ectopic pregnancies, we can inform women about the two available treatments (medical and conservative surgery). We can give information about operative risk, healing time, risk of the need for subsequent surgery if medical treatment is chosen first, and the fact there is similar subsequent fertility.

"We can also inform them that regardless of treatment, risk factors for ectopic pregnancies need to be corrected if possible, in order to enhance fertility and decrease recurrence rates, for example, by stopping tobacco consumption."

She concluded: "We hope that the results of this trial, called DEMETER after the Greek goddess of fertility, will lead to clinicians thinking carefully about the management of ectopic pregnancies, success rates, operative risks, healing time, subsequent fertility, economic aspects and, importantly, women's preferences."

More information: "Fertility after ectopic pregnancy: the DEMETER randomized trial", by Hervé Fernandez, Perrine Capmas, Jean Philippe Lucot, Benoit Resch, Pierre Panel, and Jean Bouyer, for the GROG. Human Reproduction journal. doi:10.1093/humrep/det037