

Next step in live-donor uterus transplant project

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This is Mats Brännström, Professor of Obstetrics and Gynaecology at the University of Gothenburg. Credit: University of Gothenburg

In Sweden alone, an estimated 2 000 young women of fertile age cannot become pregnant either because they were born without a womb or lost it later due to disease.

Professor Mats Brännström, researcher at the University of Gothenburg

and chief physician, is leading a unique research project aiming to make it possible for these [women](#) to have a [uterus transplant](#) and then get pregnant.

A decade of research

After more than a decade of research that has been evaluated in almost 40 scientific articles, in May 2012 the research team received permission from the Regional Ethical Review Board in Gothenburg to perform [uterus](#) transplants on ten Swedish women – the first in the world with living donors.

The first transplant was completed 15 September 2012, and the ninth and final in the spring of 2013. The tenth woman involved in the project had to be denied at an early stage for medical reasons. Five of the donors are mothers of the receivers; the remaining four a close relative.

Scientific and medical importance

In two of the nine cases, the transplanted uterus had to be removed. In one case due to blood clots in the transplanted blood vessels, in the other because of a local infection that was not fully treatable with antibiotics.

'In a scientific and medical perspective, the transplants have been successful, especially in comparison with other types of transplants that have been introduced and where far fewer initial operations have been successful.'

'The women who had to have their transplanted wombs removed were of course very disappointed, but both of them have recovered well,' says Professor Brännström.

Next phase

The first [transplant patients](#) have now had their new uterus for 16 months. During 2014 the second phase of the research project will continue, and the seven transplant patients' own embryos – produced via IVF prior to the transplant – will be placed in their uterus with the aim of starting a pregnancy.

‘We have made the first attempts at this, but with respect to the women’s integrity we will not comment on the results in the specific cases’, says Brännström.

'The prospects for success are good. On average, the women started menstruating about two months after the [transplant](#), and we followed up on the women twice a week during the first month after the procedure, then once a week for two months and after that every other week. We found and treated a few mild cases of [transplant rejection](#), but after six months, the immunosuppression could be reduced to relatively low levels in most cases and today all women are doing well and have returned to work,' says Brännström.

International interest

The project is the world's first systematic and research-based attempt to find a treatment for women with uterine infertility. Several medical, psychological and quality of life-related parameters are monitored among the women, which will be of great help for further progress in the field.

A number of research groups around the world are awaiting the results of the Gothenburg study in order to launch similar observational studies.

The article The first clinical uterus transplantation trial: a six-month report was published in *Fertility and Sterility* on 28 February. In summary, this study shows that a live-donor UTx procedure has a low risk despite extended surgery duration.

Provided by University of Gothenburg

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