

Press release

## Eight babies already born thanks to uterus transplantation

UDINE, 31 OCTOBER 2017 - Jonathan is a beautiful blond little boy, three years old and just like his playmates. He is, however, the child (and this is certainly the operative word) of an experimental surgical technique performed in Gothenburg (Sweden) in which a uterus was transplanted in a woman who lacked this organ and who, as a result of the operation, had a normal pregnancy and delivery. Another six women have since benefited from uterus transplants. The Swedish transplant surgeons reported their experience at the "HPB Surgery: Udine meets the experts" Congress when they also described liver and kidneys transplantation techniques. «Uterus transplantation is a consolidated reality, although at present limited to the Sahlgrenska University Hospital in Gothenborg. Successful pregnancies have demonstrated the feasibility and utility of the project and so we are on the road to obtaining wide scale results» comments Andrea Risaliti, Director of the Surgical Clinic and the Liver, Kidney and Pancreas Transplantation Centre of Udine Hospital-University and Chairman of the Congress. «This new challenge shows the remarkable progress made by transplant surgery. This is also underlined by the results acheived by robotic surgery and represents a challenge for the future. Laparoscopy has done much towards changing surgery in transplants but robotics is undoubtedly the latest evolution. A new challenge and a new outlook for the future, although not in the short term. For liver transplants the prospects for the future concern the type of patient earmarked as candidates for surgery. Until recently, the great majority of transplants concerned patients with hepatitis C, who fortunately, nowadays, unless there is severe damage to the liver necessitating a transplant, are able to benefit from effective and decisive pharmacological treatment. Our attention is currently focused on persons with cancer, often caused by metastasis of colorectal cancer or of vascular origin, which previously presented greater difficulties and risks for a liver transplant. Nowadays new technological and pharmacological developments have made it possible to extend the number of patients with this pathology who are suitable candidates for a transplant».

Also present at the Udine symposium was Randa Akouri, researcher at the Department of Obstetrics and Gynaecology of Sahlgrenska University Hospital, Gothenborg, who retraced the history of uterus transplantation. «The project originated in the early 2000s and continued in the following years with research and experimentation. In 2012 the Ethics

Committee of the University of Gothenburg approved transplant surgery on a 35 year old woman suffering from the Mayer-Rokitansky-Kuster-Hauser syndrome, a congenital condition marked by total or partial non-formation of the vagina and uterus» Akouri explains that «The donor was a 61 year old woman and a year after transplant it was possible to proceed with embryonic fertilization as a result of which the recipient had a normal pregnancy and delivery in September 2014. In November of the same year another two transplants were performed, thanks to the donation of their uteruses by the mothers of the two women concerned. In all, seven women received transplants. All regularly menstruated two months after surgery and embryo transfer began 12-16 months after transplantation. Six of the seven women subsequently gave birth to eight babies, five males and three females. Only one woman failed to have a baby; she became pregnant but had several miscarriages, while two women had twin births. The babies' weight was normal at birth and they developed normally, so that in conclusion we have developed a safe surgical technique for uterus transplants» continued Akouri.

The next steps are the preparation of a protocol for uterus donation after death, the creation of organs thanks to bio-engineering and the use of robotic surgery to enable us to operate less invasively, using technologies similar to those used in other cases, as for example in the presence of cervical cancer.

Absolute uterine infertility affects one woman in five hundred. The causes may be uterine aplasia, hysterectomy at an early age (cervical/uterine cancer, emergency post-partum hysterectomy), Asherman syndrome or malformation of the uterus.

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