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The First Successful Uterus Transplantation in Korea: From a Longing Wish to Become a Mother

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Here we reports the case of 35-year-old woman with Mayer-Rokitansky-Kuster-Hauser (MRKH) syndrome, a congenital condition characterized by an absent or underdeveloped uterus and vagina. She underwent uterus transplant from a living donor, and retransplant from a brain-dead donor. According to the official response document from the Ministry of Health and Welfare, the uterus transplantation was carried out as part of a clinical trial, which was approved by Institutional Review Board (2022-02-048) and funded by Research Institute for Future Medicine (SMO122083) In July 2022, uterus transplantation was performed using a uterus graft from her 59-year-old, menopausal, mother. Doppler ultrasonography, CT angiography, and MR angiography were employed to check the blood perfusion after transplantation, per protocol. The graft failed due to uterine artery and vein thrombosis, necessitating graftectomy 2 weeks post-transplant. Despite the failure, she kept in mind to become a mother. Six months later, she was given a opportunity to receive a uterus graft from a 44-year-old brain-dead female donor. The retransplantation was performed after notifying NIOTBM(prev. KONOS) and KODA. In similar fashion to 1st transplant, between the grafts bilateral anterior branch of internal iliac arteries and the recipients external iliac arteries, and between the grafts bilateral uterine veins and the recipients external iliac veins, anastomosis was performed. In addition to connecting the right gonadal vein to the recipients inferior vena cava, the left gonadal vein was ligated. Since the recipients first menstruation on post-transplant day 29, she has had regular menstrual cycles. Under the maintenance of immunosuppression, the 2, 4, 6-week, 4-month, and 6-month post-transplantation protocol biopsies revealed no indications of rejection, and the recipient is currently waiting for embryo transfer. The subsequent successful uterus transplantation from a brain-dead donor demonstrates the possibility for patients with MRKH syndrome, despite the initial failure from a living-donor transplant.