

Living donor transplantation -outcome and risk

Akademisk avhandling

som för avläggande av medicine doktorsexamen vid Sahlgrenska akademien, Göteborgs universitet kommer att offentligen försvaras i Kammaren, Vita Stråket 12, Sahlgrenska Universitetssjukhuset, Göteborg, torsdagen den 8 juni, klockan 13.00.

av Niclas Kvarnström, legitimerad läkare

Fakultetsopponent:

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Avhandlingen baseras på följande delarbeten

- I. Fehrman-Ekholm I., Kvarnström N., Söfteland J., Lennerling A., Rizell M., Odén A., Simonsson T. *Post-nephrectomy development of renal function in living kidney donors: a cross-sectional retrospective study*. Nephrology Dialysis Transplantation 2011; 26: 2377–2381.
- II. Kvarnström N., Fehrman-Ekholm I., Olausson M., Lennerling A. *Is there an increased risk for hypertension or worse outcome in live kidney donors left with multiple (>1) renal arteries?* Submitted manuscript.
- III. Kvarnström N., Fehrman-Ekholm I., Söfteland J., Olausson M., Lennerling A. *A prospective study on recovery after living kidney donation*. Submitted manuscript.
- IV. Kvarnström N., Järholm S., Johannesson L., Dahm-Kähler P., Olausson M., Brännström M. *Live Donors of the Initial Observational Study of Uterus Transplantation—Psychological and Medical Follow-Up Until 1 Year After Surgery in the 9 Cases*. Transplantation 2017; 101: 664 –670.

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Abstract

Live organ donors undergo extensive surgery to provide an organ that can be lifesaving or improve the health and quality of life for the recipient. The thesis seeks important knowledge that may be used to further reduce the donor risk for the live kidney donor as well as for an entirely new group of living donors, the uterus donor. The general aims were to investigate the outcome for the living kidney and uterus donor in both organ specific measurements and quality of life in the recovery after donation, as well as to investigate if there are markers indicating elevated risk for the donor.

Living kidney donors at the Department of Transplantation Surgery at the Sahlgrenska Academy, Sahlgrenska University Hospital and the live uterus donors at the Department of Obstetrics and Gynaecology at the Sahlgrenska Academy, Sahlgrenska University Hospital, were recruited. The study types used herein included a cross-sectional study on long-term kidney function, analysis of internal quality register data and prospective studies on both living kidney and uterus donors. Both objective and quantified subjective data (Patient-Reported Outcome) were used for statistical analysis. After an initial decrease, followed by the removal of one kidney at donation, the kidney function increased over time after donation for years while later on it decreased with donor age. The number of arteries did not seem to affect the initial increasing capacity of the remaining kidney. The kidney donor was typically recovered both physically and mentally after three months following donation and socioeconomic factors may have influenced the recovery. The entirely new donor group, living uterus donors, returned to their previous physical health and well-being after the donation. In conclusion, implementation of the current guidelines on living donor evaluation and care provides safe selection and minimize the donor risk although psychosocial and socioeconomic factors may influence the recovery.

Keywords: living donor, kidney, uterus, transplantation, surgical complications, recovery