MP59-04 – Systemic vascular function of kidney donor influences short-term renal performance of receptor

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Introduction

• Renal function is highly dependent on adequate vascular function.
• Specially relevant when considering the increasing use of older and marginal kidney donors to overcome organ unavailability.
• Sexual dysfunction represents a determinant factor in the development of cardiovascular manifestations in these patients.
• ED is related to vascular function of penile tissues and is significantly associated with CVD.
• The search for markers predicting performance of transplanted kidney has been focused almost exclusively on characteristics of the receptor.

Aim

• The aim of this work was to evaluate the influence of donor’s vascular function at different vascular beds on renal function in kidney recipients.

Methods

• Human aorta, omentum and corpus cavernosum specimens, were obtained from organ donors (OD) at the time of organ collection for transplantation.
• Serum creatinine and glomerular filtration rate were determined as indicators of renal function in the receptors of the kidneys from the studied donors. Follow up visits took place at 3, 6, 12 and 24 months.
Results

Endothelial function in donor’s mesenteric vasculature relates to renal function in kidney recipient at short-/mid-term. This relationship weakens at longer term.

Parameters of renal function in kidney recipient at short-/mid-term are also associated with endothelial function in corpus cavernosum from male donors.

Conclusions

1. Vascular function of kidney donor seems to exert a significant influence on renal function outcomes at short-/mid-term in kidney receptor.

2. The influence of donor’s vascular function extends to different vascular beds outside renal vasculature.

3. This evidence provides some insight in donor phenotype for determining kidney function after transplantation and fosters the search for markers of vascular function that could predict renal outcomes.