

ABSTRACT

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Title of master's thesis: Kidney transplantation: donor-recipient pairing in University Hospital Hradec Králové

Background: The aim of this study was to determine HLA, blood group, age and sex match in donor-recipient pairing in kidney transplantation. HLA alleles of deceased donors were typed in Transfusion Department of the University Hospital Hradec Králové.

Methods: Donor's HLA-A*, HLA-B* and HLA-DRB1* alleles were typed by PCR – SSP method. Complex data evaluating and processing was then performed.

Results: 97 deceased donors were tested between 2013 and 2018. A total of 98 kidneys received from them were subsequently transplanted to 98 recipients in University Hospital Hradec Králové. 60,2 % of the donors were men, 63,3 % of the recipients were men. Most of the donors, as well as the recipients, were 51–70 years old (50,0 % and 59,2 %, respectively). The most common diagnoses in the group of deceased donors were associated with brain damage (66,3 %), the most common cause of renal failure in the group of recipients was chronic inflammatory kidney disease (41,8 %). All 98 transplantations (100,0 %) were ABO compatible. 74 transplantations (75,5 %) were RhD compatible. 5 mismatches out of 6 HLA antigens were the most common (34,7 % transplantations). Most of the matched HLA antigens were from the HLA-DRB1* locus (34,2 %). An average match of 1,7 HLA antigens was achieved. In 50,0 % of transplantations, donor sex and recipient sex were the same. In 52,0 % of the cases, a younger donor provided kidney to an elderly recipient.

Conclusions: 5 mismatches out of 6 HLA antigens were the most common (34,7 % transplantations). Most of the matched HLA antigens were from the HLA-DRB1* locus (34,2 %). An average match of 1,7 HLA antigens was achieved.

Keywords: HLA system. Typing of HLA antigens. Kidney transplantation. Donor. Recipient.