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**THE BENEFITS OF INDUCTION AND PERFUSION IN RENAL TRANSPLANTATION  
- DISCUSSION ABOUT CRUCIAL AGENTS IN KIDNEY ALLOGRAFT SURVIVAL**

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**Rationale.** The majority of the patients with chronic renal disease in last stadium are referred for dialyses in the period of waiting for the proper donor for renal transplantation. There are many other factors that influence the outcome of transplanted kidney. Graft ischaemia is an adverse outcome that may be prevented by avoiding prolonged cold ischaemia time and perfusing the graft in a hypothermic perfusion machine, for instance Life Port. Induction with a specific monoclonal antibody (basiliximab, ATG) is an essential treatment against acute graft rejection after kidney transplantation.

**Objective:** The aim of the study is to determine impact of various factors on graft survival and successful renal transplantation.

**Material and methods.** Retrospective analysis of 181 patients after renal transplantation in Vascular Surgery and Transplantation Clinic in Bialystok in years 2007-2016. The factors taken into consideration: perfusion of the allograft and cold ischaemia time, induction, etiology of chronic renal disease, dialysis modality applied before the transplantation. Early outcome was assessed by measuring serum creatinine and verifying urine production by the allograft in few consecutive days after the transplantation.

**Results and discussion.** Induction therapy was successfully applied to 27 patients in high risk of acute rejection. 154 patients had no need for induction therapy. Perfusion of the graft before operation puts the kidney in better condition for the transplantation and allows a longer safe period between retrieval and transferring to the recipient, what was noticed in our analysis. 143 patients were treated with hemodialysis before transplantation, 27 had peritoneal dialysis. Our analysis showed that peritoneal dialysis is associated with shorter hospitalization time, lower creatinine levels and lower incidence of delayed graft function. Moreover, presence of diabetes or hypertension increases risk of delayed graft function significantly and is associated with longer hospitalization and inferior graft function.

**Conclusions.** Induction therapy reduces acute rejection in patients after renal transplantation. Perfusion in hypothermic machine is beneficial renal graft preservation technique. Patients with diabetes, hypertension and those undergoing long term hemodialysis should be considered with special attention, because those factors correlate with wide range of side effects and higher risk of impaired graft function.