

# EXTRACORPOREAL PHOTOCHEMOTHERAPY FOR THE PREVENTION OF RENAL TRANSPLANT REJECTION (LONG-TERM OBSERVATION)

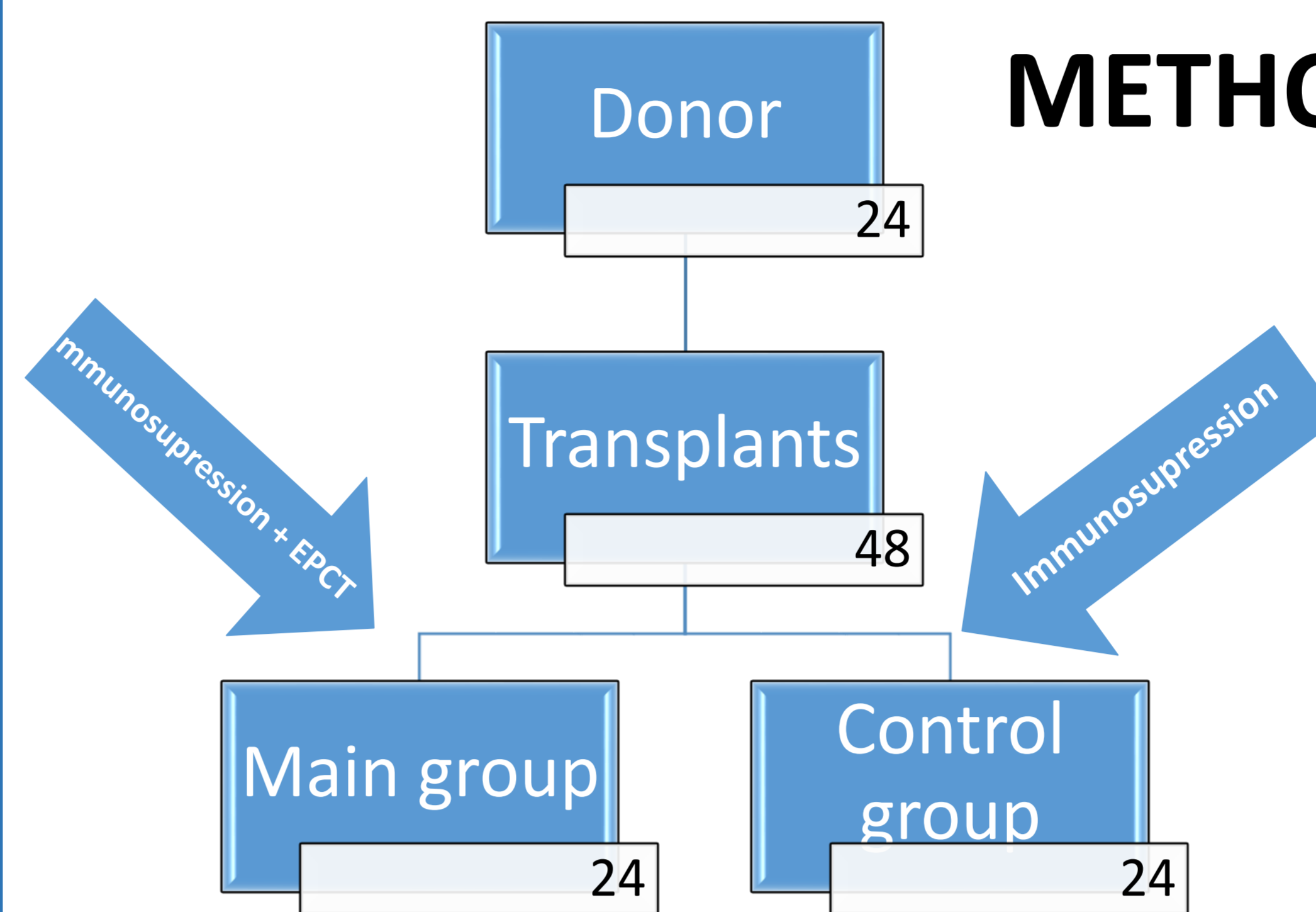
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## AIMS

Unlike most foreign authors applying extracorporeal photochemotherapy (EPCT) at kidney transplantation, in our study, the protocol of photopheresis was aimed specifically at preventing of rejection. Such publications began to appear just recently and none of these publications tells about the long-term results of applying the method. Therefore the aim of the study was to determine the value of EPCT in the long-term survival of renal transplants which have got it like a prevention of rejection in early postoperative period.

## METHODS

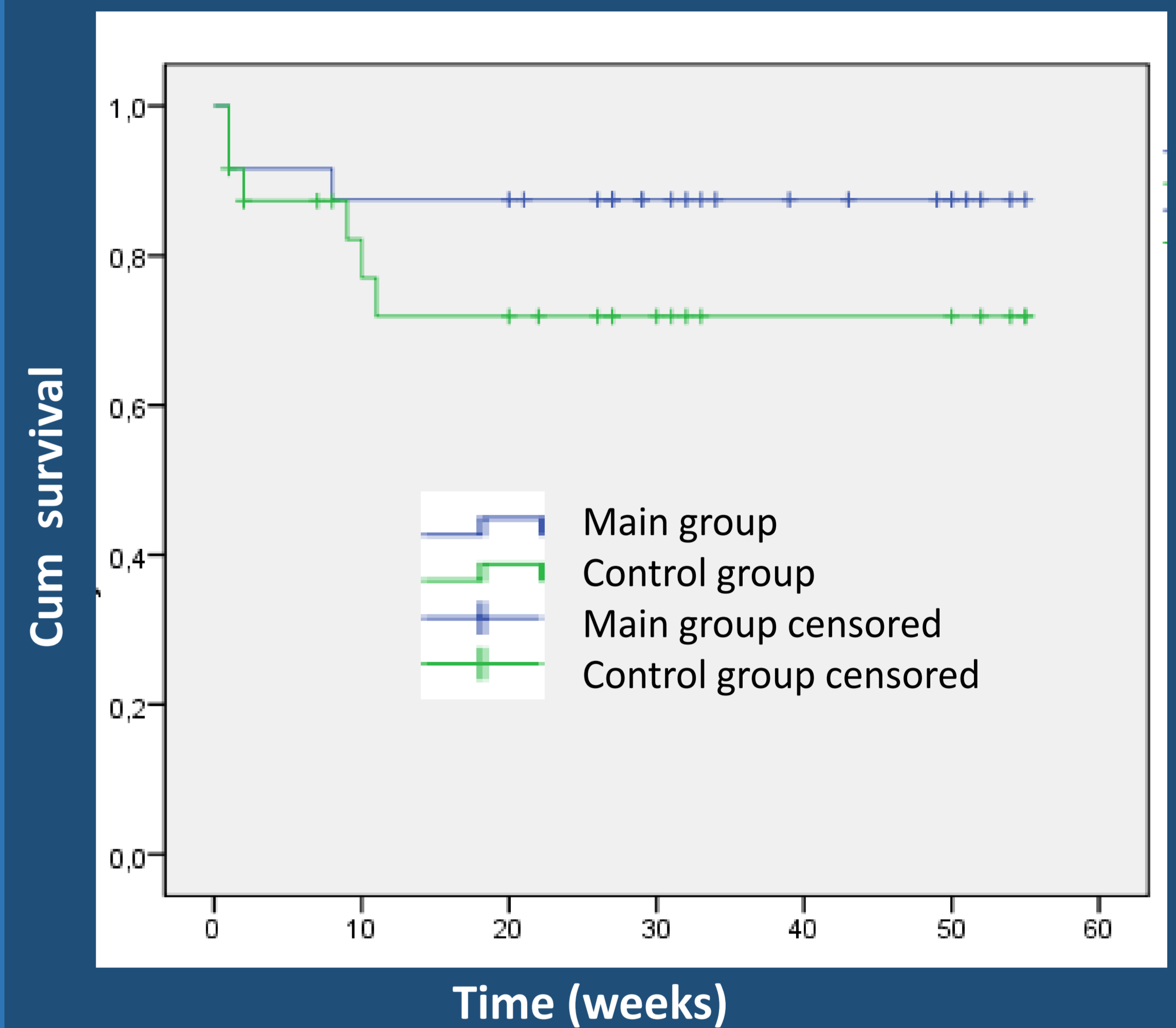


Patients in two groups did not differ significantly by gender, age and structure of the primary disease, duration of renal replacement therapy prior to transplantation and designated immunosuppressive therapy

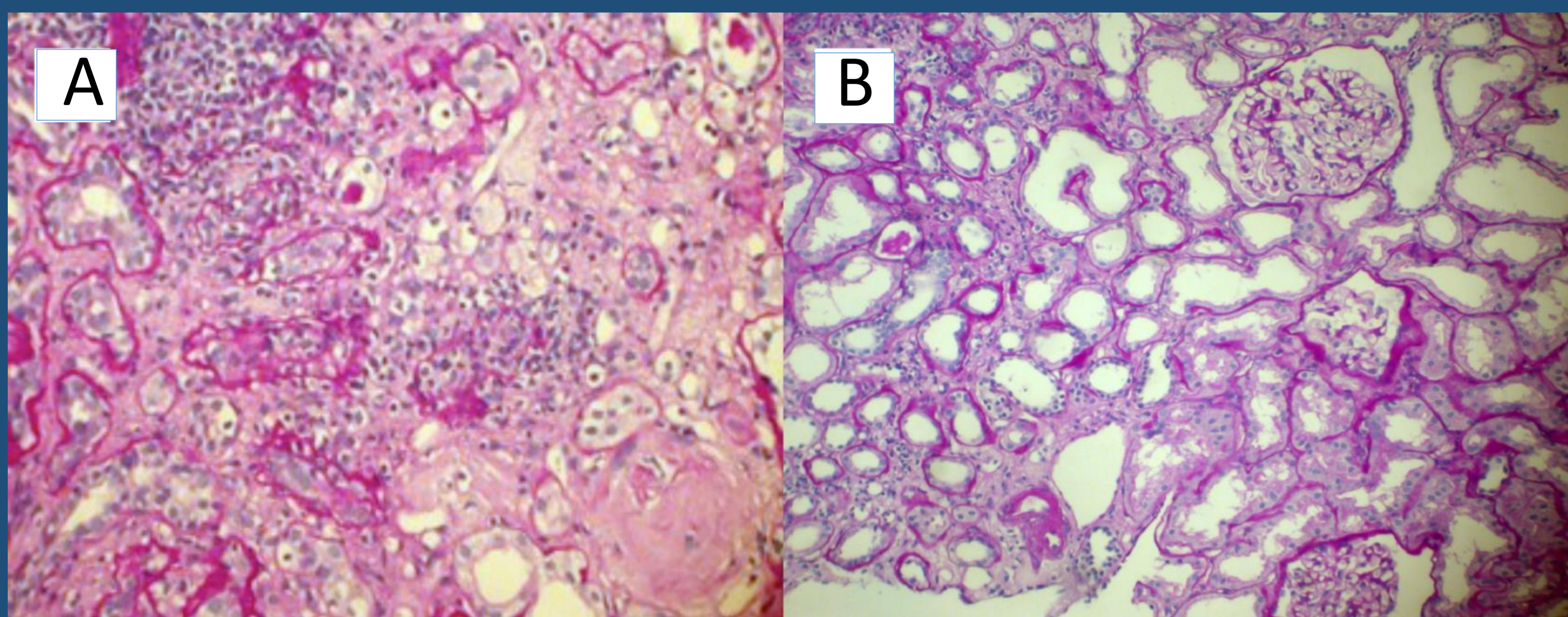
## RESULTS

Events	Main group				Control group			
	1 (n=24)	2 (n=22)	3 (n=13)	4 (n=9)	1 (n=20)	2 (n=17)	3 (n=9)	4 (n=7)
Rejection					4			
Chronic transplant nephropathy	3		1		7	2	3	1
Infections:								
-pulmonary	1				8	1	1	
-urinary	2				6	2	1	
-surgical	1							
focal segmental glomerulosclerosis					1	1		
Transplantectomy					3	1		
Deaths					1			
Period events	7		1		48	7	5	1
Total events		8				61		
<b>Hospitalizations</b>	<b>6</b>		<b>2</b>		<b>22</b>	<b>17</b>	<b>7</b>	<b>1</b>

In the group using EPCT over a four-year period of observation any clinical or histological signs of rejection was not observed. In the control group histologically confirmed rejection were observed in 4 cases and in 2 – graft removal because of acute rejection. Protocol biopsies also confirmed the signs of chronic transplant nephropathy in the long term in patients of control group. Also noted any reduction of infections in the main group compared with the control (4 and 19 cases, respectively) and numbers of hospitalizations (8 and 47 cases). The proportion of the control group patients hospitalized again after transplantation, was from 14 to 100% of the cases noted at different time periods. Moreover, it can be concluded that each recipient in the group without EPCT was at least once hospitalized for different reason, and some of them even twice were received hospital treatment.



Therefore particularly interesting are the results of a comparative analysis of graft survival, which showed that the graft survival was 100% and 83.3% in the study and control group respectively. 3 patients in the control group underwent transplantectomy during the first year after transplantation, for reasons of recurrent pyelonephritis, acute rejection and thrombosis of transplant veins. One transplantectomy performed after the first year (focal segmental glomerulosclerosis on biopsy).



Morphology of paired allografts: recipient of the control group with rejection IB by Banff (A) and the recipient of the main group with chronic transplantation nephropathy of 1 degree (B) 6 months after transplantation (PAS, magnification x100).

## CONCLUSIONS

Our study showed that applying this method in the early postoperative period after kidney transplantation can prevent rejection in the future, so it will lead to improving the quality of patient's life, reduce the overall level of immunosuppressive load, reduce the number of infections and other complications, increase life expectancy of patients and transplants.

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