KIDNEY RETRANSPANTATION - ARE THE GOOD RESULTS ATTAINABLE? - REVIEW.
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ABSTRACT
Kidney transplantation is the best-known method of treatment for patients with end-stage renal disease. Thanks to the development of effective immunosuppressive regimens in kidney transplantation, graft and patient survival during last decades has lengthened. However, chronic allograft dysfunction remains the main problem as long as kidney transplantation is concerned and is one of the main reasons for patients return to the dialyses program. 25% of the patients on the waiting list are patients qualified for retransplantation. The aim of this study was to analyze literature from PubMed database regarding kidney retransplantation results. Kidney retransplantation is considered the preferred treatment for patients with renal allograft failure, not only because the good results are attainable but also because of the significant improvement of quality of life in the retransplanted patients and the costs are comparable.
Background

Kidney transplantation is the best-known method of treatment for patients with end-stage renal disease. Thanks to the development of effective immunosuppressive regimens in kidney transplantation, graft and patient survival during last decades has lengthened. However, chronic allograft dysfunction remains the main problem as long as kidney transplantation is concerned and is one of the main reasons for patients return to the dialysis program. According to Poltransplant [1], 25% of the patients on the waiting list are patients qualified for retransplantation. Graft survival rates following re-transplantation have improved in recent years [2].

Material and Methods

The aim of this study was to analyze literature from PubMed database regarding kidney retransplantation results.

Kidney retransplantation is concerned with lower mortality rate compared with remaining on dialysis [3, 4]. Undoubtedly, there are factors that significantly increase the risk of death while on dialysis. For instance, patients suffering from diabetes have higher mortality rate. In that group of patients, retransplantation was associated with a 45% decrease in five-year mortality risk [5]. As long as IgA nephropathy is concerned, although the recurrence of IgA nephropathy after kidney transplantation has an effect on graft survival, the patients who underwent retransplantation showed favorable results [7].

Apart from the reason of kidney failure, mortality following graft failure is also influenced by the time between primary renal replacement therapy and primary transplant. According to the French study, preemptive second kidney transplantation is associate with better graft survival compared with non-preemptive second transplantation [6].

Not without an influence remains the donor type. It seems that recipients who received their consecutive graft from living donors had greater reduction in mortality rate that those who received a graft from a deceased donor. The reason for that may be the shorter ischemia time and less amount of delayed graft function and acute rejection episodes [8, 9].

However, some studies show that kidney retransplantation is associated with high rated of acute rejection episodes. It may be associated with previous sensitization, especially in patients who are being qualified for the third transplant [10]. Such group of patients may require pre-transplant desensitization therapy. As a result of that procedures, second kidney transplants have been reported to have similar outcomes to the first transplant [17]. However, still, retransplant patients have much higher incidence of early acute T-cell-mediated rejection compared to the first transplant group [18]. Hummer et al suggested that there is a lower incidence of chronic rejection in group of patients without previous acute rejection [21].

According to recent studies, the second graft survival rates are comparable to those achieved by the first transplant [10, 11]. When using new immunosuppressive regimens the survival of consecutive grafts does not differ from the first one grafts [12, 14]. Patients qualified for repeated transplant are more likely to be prescribed more aggressive immunosuppressive protocol, including induction therapy. However, previous studies [13] reported inferior repeated graft survivals.

Without any doubt, retransplantation improves the quality of life [15] as compared with dialysis.

An interesting finding was described by Panchal [16]. According to his study, patients with at least one prior failed graft who received a kidney graft from ECD, had better overall survival compared with patients who received ECD kidneys as their primary transplant. It is suggested that ECD kidneys should be better allocated to patients qualified for retransplantation.

For patients with renal allograft failure it always better to be qualified for the second transplant than to remain in the dialysis program. There is no difference between hemodialysis and peritoneal dialysis [14, 19, 20]. A second transplantation always gives benefit to patients with failed grafts without the effect of other mortality factors.

According to, the incidence of cancer (lymphoma) was not increased in the group of patients with second grafts (3.4% versus 2.8%) [17]. There is also a question whether the failed graft should be removed prior second transplantation. There are several clinical indications that suggest removing a graft such as fever, anemia, hematuria, graft tenderness or pain, or to make a room for a subsequent graft [22, 23]. Apart from the risks connected with surgical procedure, there are some that may be cause an increase in panel-reactive or donor-specific anti-HLA antibodies. There are studies that claim that graft nephrectomy does not impact on the outcome of the retransplantation [23]. On the contrary, Schleicher et al. suggests that in his study patients with graft nephrectomy were at higher risk of primary non-function and acute rejection of a subsequent graft [24]. Because of the increased perioperative morbidity and mortality connected with graft nephrectomy and possible risks of immunological reactions, graft nephrectomy should be reserved for a selected group of patients only.

Conclusions

Kidney retransplantation is considered the preferred treatment for patients with renal allograft failure, not only because the good results are attainable but also because of the significant improvement of quality of life in the retransplanted patients and the costs are comparable.

Cite this as


Abbreviations

ECD - expanded criteria donor

References

1.  www.poltransplant.org


