**IMPROVING REJECTION RATE BY ADJUSTING IMMUNOSUPPRESSION PROTOCOL IN RENAL TRANSPLANT**

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**Introduction**

First kidney transplant was done between identical twins without need for immunosuppression.

From 1954 to 1958, the only immunosuppression were Prednisone and Imuran, rejection rate were 80%, one year graft survival rate were 40%, HLA was the most important factor in graft survival.

In 1980, Cyclosporin was discovered and survival rate reached 80% after one year. Many drugs were discovered after that as FK506, cellcept, OKT3, thymoglobulin, simulect. In the last 10 years,

**Methods**

One thousand one hundred kidney transplants done at KFSH&RC, immunosuppression protocol was changed according to literature recommendation. Induction with ATG was given only to cadaveric transplant to delay the use of calcineurin inhibitor, then it was found that induction with ATG, thymoglobulin or interleukin receptor antagonist (Simulect) would decrease the rejection rate. Changing the protocol to fit specific patient need according to the immune status of the patient was able to decrease the rejection rate for 30% to 6% in spite of doing highly sensitized and ABO incompatible patient and ultimately improves graft survival, without increasing the risk of infection or malignancy.

**Conclusion**

Reject affect the immediate and late graft survival. The real advance in transplant is immunosuppression drugs and crossmatch technique. Immunosuppression should be adjusted according to patient need and immuno status of the patient. Induction therapy improves rejection rate significantly.

We have to keep the balance between over immunosuppression with its complication (cancer, infection) and under immunosuppression and its complication (rejection rate and graft loss).