Summary and Conclusion

The success of renal transplantation has increased dramatically during the past two decades driven by advances in understanding of biologic processes of graft injury and the selective inhibition of key molecular signals by new immunosuppressive drugs.

Glomerulonephritis (GN) post transplantation is one of the most important factors affecting graft outcome, it has been reported in up to 40% of patients, and the cumulative probability increases with time after transplantation, although with great variation in frequency and severity.

This present work was designed to evaluate the impact and risk factors for developing Post Transplant GlomeruloNephritis (PTGN) on graft and patient outcome.

This study comprised 2000 kidney transplant recipients, who received their grafts between March, 1976 and January, 2010 at Mansoura Urology and Nephrology Centre, 103 recipients suffered PTGN; 17.5%(n=18) recurrence, 14.5% (n=15) De Novo GN and 68% (n=70) had Transplant Glomerulopathy.

The risk factors for the development of post transplant glomerulonephritis was; glomerulonephritis as the original kidney disease, donor age 31-40 years old, and Sirolimus based immunosuppression protocol, while the difference in blood grouping between the donor and recipient carried a favorable significant delay in the development of post transplant GN.

The incidence of Recurrent and De novo GN was earlier post transplantation compared with Transplant Glomerulopathy. The recurrent GN was the earliest glomerular lesion observed in the first 3 months post transplantation.

FSGS was the most common histo-pathological type of post transplantation GN being 50% of the recurrent GN and 33.3% of the de novo GN. MPGN represent the second common histo-pathological type.

The graft survival in PTGN recipients was comparable to those who did not develop post transplant GN in the first two years. Thereafter, significant drop of graft survival was observed in the PTGN recipients.

The graft survival in the recipients with Recurrent GN was significantly lower than the graft survival of recipients who developed De novo GN and Transplant Glomerulopathy.

The risk factors associated with graft loss were; recipient age between 40 and 50 years, induction therapy with polyclonal antibody (ATG), incidence and number of acute rejection episodes, development of chronic rejection, De novo GN has an independent negative impact on the long term graft loss. Middle aged donor grafts, patient receive their grafts from their off springs, and different blood groups between recipients and donors had favorable significant effect on graft survival.

The patient survival in the recipients with Post Transplant GN was comparable to those without PTGN in the first 5 years post transplantation. Thereafter, significant drop of patient survival was observed in the group of recipients who suffered from De novo GN and Transplant Glomerulopathy.

We concluded that:

Post transplant glomerulonephritis had a poor prognosis on graft outcome.

Recurrent and De novo GN had occurred earlier post transplantation than Transplant glomerulopathy.

The recurrent GN was the earliest glomerular lesion observed in the first 3 months post transplant and had a poorer graft outcome in the first 2 years after transplantation.

De novo GN has an independent negative impact on the long term, after the first 2 years, graft loss risk than the other glomerulonephritis histo-pathological types.

Focal SGS was the most common histo-pathological type of post transplantation GN and MPGN represent the second common histo-pathological type. Patients with FSGS had a significant recurrence rate followed by MPGN.

Sirolimus based immunosuppression protocol was associated with more risk for the development of glomerulonephritis post transplant.

Patient survival was not affected by the development of PTGN.