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P217 -The Use of Dual and Triple Immunosuppression Strategies For Kidney Transplant Recipients at a Single Centre.

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Introduction

Mycophenolate has been used as an adjunctive immunosuppressive agent with tacrolimus and steroid to prevent kidney transplant rejection for the last 20 years. Lower rates of acute rejection are associated with its use compared with tacrolimus and prednisolone alone (triple versus dual strategies). It is less well known whether dual immunosuppression has advantages with regards to reduced adverse events in the longer term. We report a real world study comparing the outcomes of dual versus triple immunosuppression strategy in the current era.

Methods

Our unit is served equally by two kidney transplant centres. Immunosuppression protocols for low risk patients differ with one centre favouring dual immunosuppression (tacrolimus and prednisolone) with triple immunosuppression (tacrolimus and prednisolone with mycophenolate) used for donation after cardiac death (DCD) donors and in delayed graft function, and the other centre favouring triple in all recipients. We assessed 1 year transplant outcomes on 153 kidney transplant recipients between 2013 and 2017 comparing those started on either dual or triple immunosuppression. We reviewed electronic and paper hospital records, and compared graft function, graft and patient survival, adverse events including rejection, infections and malignancy using parametric, non-parametric and chi-2 tests as appropriate.

Results

114 (75%) people received triple compared to 39 (25%) receiving dual immunosuppression as first line therapy. Median (IQR, range) age of the cohort was 51 (IQR 40-60, range 20-75), 68/153 (44%) were female, median eGFR at 1 year was 50 (IQR 38-62, range 10-116). 4/153 (3%) patients died within the first year, and an additional 2/153 (1%) lost grafts within first year. There were 61 donation after brainstem death (DBD), 45 DCD, and 47 live donor transplants.

Comparing those on triple versus dual immunosuppression respectively: -

Median age was 50 (41-60, 20-75) v 54 (39-66, 20-73) (p=0.8), 3/114 (3%) on triple died compared to 1/39 (3%) on dual. Median eGFR was 48 (34-62, 10-116) in those on triple v 54 (49-62, 35-84) (p=0.1) in those on dual. All 2 death censored graft loss within first year were on triple (p=0.4)

There were fewer rejection episodes in the triple immunosuppression group 19/114 (17%) v dual 13/39 (33%), (p=0.03). T-cell mediated rejection was 13/114 (11%) v 8/39 (21%) (p=0.2), Borderline rejection was 5/114 (4%) v 6/39 (15%) (p=0.02).

Those with a rejection episode had lower end of year eGFR median 41 (31-53, 20-69) v 50 (43-69, 10-116) p=0.002 (death with functioning graft excluded).

There was not a clear difference in hospital requiring infection triple 39/114 (34%) v dual 9/39 (23%) (p=0.2), CMV viraemia triple 24/114 (21%) v dual 9/39 (23%), CMV disease 3/114 (3%) v 0/39 (0%) (p=0.3), BK viraemia 19/114 (17%) v 6/39 (15%), BK nephropathy 3/114 (3%) v 0/39 (0%), (p=0.3), or cancers triple 10/114 (9%) v dual 4/39 (10%) (p=0.8).

Conclusion

Use of triple compared to dual immunosuppression post kidney transplant resulted in fewer rejection episodes, no overall difference in 1 year eGFR or graft loss, and no clear difference in hospital acquired infection, viraemia, or cancer incidence within the first year post transplantation.