Acute Antibody Mediated Rejection (AMR)

(Modified from Monash protocol courtesy of A/P John Kanellis Jan 2014)

Definition

Rejection caused by antibodies to HLA antigens, ABO blood group antibodies and non-MHC molecules.

Diagnosis

- Raised creatinine
- Histological evidence of acute tissue injury (1 or more of the following)
    - Microvascular inflammation
    - Intimal or transmural arteritis
    - Acute thrombotic microangiopathy, in the absence of any other cause
    - Acute tubular injury, in the absence of any other apparent cause
- Evidence of recent or current antibody interaction with vascular endothelium (at least one of the following)
    - Linear C4d+ staining in peritubular capillaries
    - at least moderate microvascular inflammation
- Detection of donor specific antibodies (HLA or other antigens)

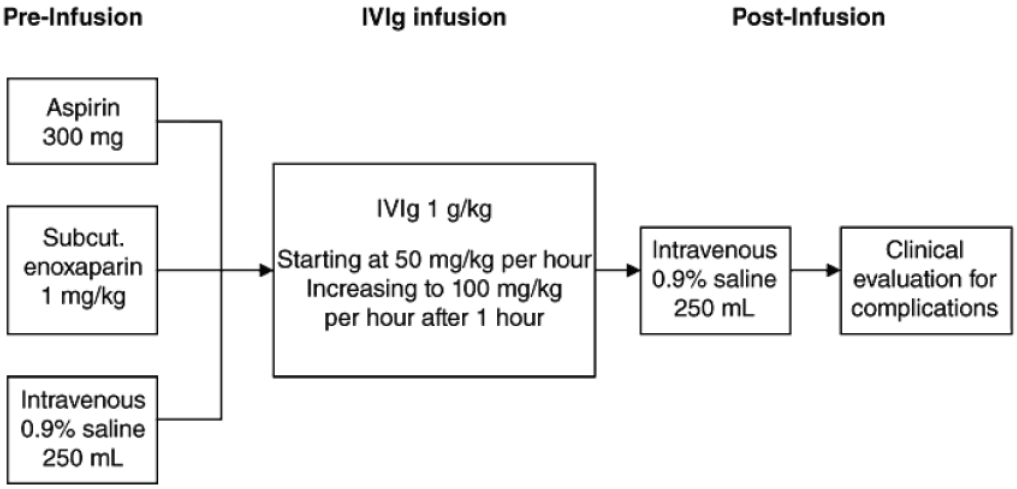
Treatment

- Maximise mycophenolate or mycophenolic acid, convert to tacrolimus if able (Tac level 4-8)
- Recommence or continue CMV and PJP prophylaxis.
- In view of the risks of HBV reactivation, specialist opinion for initiation of antiviral agents is to be considered in patients with positive anti HB core antibodies
- Pulse methylprednisolone 500mg ivi x 3 doses and recommence maintenance steroids if previously withdrawn.
- Plasma exchange with 5% albumin (unless coagulopathy or recent biopsy in which case FFP is used)
    - 2-3L daily for 3 days then 2$_{nd}$ daily for 2-4 weeks
    - IVIG 0.1g/kg after each exchange (see below for thrombotic risk reduction during IVIG therapy)
- Renal graft biopsy after the above treatment
- If ongoing AMR, continue second daily plasma exchanges and IVIG for a further 2-4 weeks and repeat the biopsy
- Consider continued therapy with IVIG 1g/kg per month as below if improved but there is ongoing activity present. Also consider rituximab 500mg single dose.

Alternative treatment

If no vascular access and/or mild AMR, IVIG 1gm/kg (max 80gm) monthly for 3 months. Repeat biopsy to review degree of activity. Consider repeat IVIG for 3-6 months. Consider rituximab if ongoing activity.

Reducing thrombotic events in renal transplant recipients treated with IVIgfor antibody-mediated rejection



TO BE DISCUSSED WITH NEPHROLOGIST FIRST

Nephrology Volume 16, Issue 2, pages 239-242, 27 JAN 2011

John Kanellis. Monash. Vic.2011

References

Haas M. An updated Banff schema for diagnosis of antibody-mediated rejection in renal allografts. Curr Opin Organ Transplant 2014, 19:315–322.

Monash protocol courtesy of A/P John Kanellis Jan 2014